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1. IDENTIFICATION
Odorless Mineral Spirits

CAS # 68551-19-9

2. HAZARDS IDENTIFICATION
Classification of the substance or mixture
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Emergency Overview

Danger

Form: Liquid

Physical state: Liquid

Color: Colorless at room temperature

Odor: Mild, Hydrocarbon

OSHA Hazards: Combustible Liquid, Aspiration hazard

Classification

Flammable liquids, Category 4

Aspiration hazard, Category 1

Signal word: Danger

Hazard Statements: Combustible liquid

May be fatal if swallowed and enters airways

Precautionary Statements:

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/ eye protection/ face protection.

Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
In case of a fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage: Store in a well-ventilated place, keep cool. Store locked up

Disposal: Dispose of contents/container to an approved waste disposal plant.

Carcinogenicity:

IARC:
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP:
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH:
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

3. COMPOSITION

Synonyms:
Isoalkanes
Isoparaffins
Aliphatic hydrocarbon

Molecular formula: UVCB

COMPONENT | CAS # | WEIGHT %
--- | --- | ---
C12-C14 Isoalkanes | 68551-19-9 | 100%

4. FIRST AID MEASURES

GENERAL ADVICE:
Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

IF INHALED:
If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

IN CASE OF SKIN CONTACT:
If on skin, rinse well with water. If on clothes, remove clothes.

IN CASE OF EYE CONTACT:
Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

IF SWALLOWED:
Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

5. FIRE FIGHTING MEASURES

Flash point | 61˚ C (142 F) |
Method Tag closed cup

Autoignition temperature | 230˚ C (446˚ F) |
Suitable extinguishing media
Alcohol-resistant foam. Carbon Dioxide (CO2) Dry Chemical

Unsuitable extinguishing media
High volume water jet

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary

Further information
For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection
Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition

Hazardous decomposition products
Carbon Dioxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions:
Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up:
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Advice on safe handling
Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion
Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Storage
Requirements for storage areas and containers
No smoking. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>TWA</td>
<td>1,200 mg/m3</td>
<td>RCP</td>
</tr>
</tbody>
</table>

RCP = Reciprocal Calculation Procedure

Engineering measures
Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this
material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment
Respiratory protection
Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand Protection
The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye Protection
Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the workplace. Wear as appropriate: Flame-resistant clothing. Footwear protecting against chemicals.

Hygiene measures
When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties

Appearance

Form
Liquid

Physical State
Liquid

Color
Colorless at room temperature

Odor
Mild, hydrocarbon

SAFETY DATA

Flash Point
61°C (142°F)
Method: Tag closed cup

Lower explosion limit
0.68% (V)

Upper explosion limit
5.4% (V)

Oxidizing properties
no
Autoignition temperature: 230˚C (446˚F)
Thermal decomposition: no data available
Molecular formula: UVCB
Molecular weight: Not applicable
pH: 7
Pour point: no data available
Boiling/Point & range: 179 - 210˚C (354 - 410˚F)
Vapor pressure: 2.60 MMHG @ 38˚C (100˚F)
Relative density: 0.76, 15.6˚C (60.1˚F)
Water Solubility: negligible
Partition coefficient: n-octanol/water: No data available
Viscosity, kinematic: 1.5 cSt @ 38˚C (100˚F)
Relative vapor density: 3 (Air = 1.0)
Evaporation rate: 1
Percent volatile: >99%

10. STABILITY AND REACTIVITY
Chemical stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid: Heat, flames and sparks
Materials to avoid: may react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Thermal decomposition: No data available
Hazardous decomposition products: Carbon oxides
Other data: No decomposition if stored and applied as directed

11. TOXICOLOGICAL INFORMATION
Acute oral toxicity
C12-C14 Isoalkanes
LD50: > 5000 milligram per kilogram
Species: rat
Method: OECD Test Guideline 401
Information given is based on data obtained from similar substances.

Acute inhalation toxicity
C12-C14 Isoalkanes
LC50: > 5.3 milligram per liter Exposure time: 4 h
Species: rat
Test atmosphere: vapor
Method: OECD Test Guideline 403
Information given is based on data obtained from similar substances.

Skin irritation
C12-C14 Isoalkanes
No skin irritation
Information given is based on data obtained from similar substances.

Eye irritation
C12-C14 Isoalkanes
No eye irritation
Information given is based on data obtained from similar substances.

Sensitization
C12-C14 Isoalkanes
Classification: Did not cause sensitization on laboratory animals.
Information given is based on data obtained from similar substances.

Repeated dose toxicity
C12-C14 Isoalkanes
Species: Monkey
Application Route: Inhalation
Dose: 0, 654 ppm
Exposure time: 4 wk
Number of exposures: 6 h/d, 3 d/wk NOEL: > 654 ppm
Method: OECD Test Guideline 412
Species: rat, male and female Sex: male and female Application Route: oral gavage Dose: 0, 25, 150, 1000 mg/kg/d Exposure time: 4 wk
Number of exposures: daily
NOEL: >= 1000 mg/kg/d
Method: OECD Guideline 422
Information given is based on data obtained from similar substances.

Reproductive toxicity
C12-C14 Isoalkanes
Species: rat
Sex: male
Application Route: oral gavage
Dose: 0, 750, 1500, 3000 mg/kg/bw/d
Number of exposures: daily
Test period: 90 d
Method: OECD Test Guideline 415
NOAEL Parent: >= 3000 mg/kg/bw/d
Information given is based on data obtained from similar substances.
Species: rat
Sex: female
Application Route: oral gavage
Dose: 0, 750, 1500 mg/kg/bw/d
Number of exposures: daily
Test period: 90 d
Method: OECD Test Guideline 415
NOAEL Parent: >= 1500 mg/kg/bw/d
NOAEL F1: 750 mg/kg/bw/d
Information given is based on data obtained from similar substances.
Species: rat
Sex: male and female
Application Route: inhalation (vapor)
Dose: 100, 300 ppm
Number of exposures: 6 h/d/5d/wk
Test period: 8 wk
Method: OECD Guideline 421
NOAEL Parent: >= 300 ppm
NOAEL F1: >= 300 ppm
Information given is based on data obtained from similar substances.

Developmental Toxicity
C12-C14 Isoalkanes
Species: rat
Application Route: Inhalation
Dose: 100, 300 ppm
Exposure time: GD 6-15
Number of exposures: 6 h/d
NOAEL Teratogenicity: >= 300 ppm
Information given is based on data obtained from similar substances.
Species: rat
Application Route: Inhalation
Dose: 300, 900 ppm
Exposure time: GD 6-15
Number of exposures: 6 h/d
Method: OECD Guideline 414
NOAEL Teratogenicity: >= 900 ppm
NOAEL Maternal: >= 900 ppm
Information given is based on data obtained from similar substances.
Species: rat
Application Route: oral gavage
Dose: 0, 500, 1000, 1500 mg/kg/d
Exposure time: GD 6-15
Number of exposures: Daily
Method: OECD Guideline 414
NOAEL Teratogenicity: 1,000 mg/kg
NOAEL Maternal: 500 mg/kg
Information given is based on data obtained from similar substances.

Aspiration toxicity
C12-C14 Isoalkanes
May be fatal if swallowed and enters airways.

CMR effects
C12-C14 Isoalkanes
Carcinogenicity: Limited evidence of carcinogenicity in animal studies
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects
Teratogenicity: Animal testing did not show any effects on fetal development.
Reproductive toxicity: No adverse effects expected

Isoparaffin Solvent my degrease the skin

SDS: ODORLESS MINERAL SPIRITS
12. ECOLOGICAL INFORMATION

TOXICITY TO FISH

C12-C14 Isoalkanes
LL50: > 1,000 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout) semi-static test
Method: OECD Test Guideline 203 Information given is based on data obtained from similar substances.

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES

C12-C14 Isoalkanes
EL50: > 1,000 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Method: OECD Test Guideline 202 Information given is based on data obtained from similar substances.

Toxicity to algae
C12-C14 Isoalkanes
EL50: > 1,000 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata (green algae) Growth inhibition Method: OECD Test Guideline 201 Information given is based on data obtained from similar substances.

Toxicity to fish (Chronic toxicity)
C12-C14 Isoalkanes
NOELR: 0.316 mg/l Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR modeled data

Biodegradability
C12-C14 Isoalkanes
aerobic 31 %
Testing period: 28 d
Method: OECD Test Guideline 301F
Information given is based on data obtained from similar substances.
Expected to be inherently biodegradable.

Results of PBT assessment
C12-C14 Isoalkanes
Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information
C12-C14 Isoalkanes
This material is not expected to be harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

The information in this SDS pertains only to the product as shipped.
Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product
Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a
licensed waste management company.

Contaminated packaging:
Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION
The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Testing (ASTM D4206) has shown product does not sustain combustion.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION
National legislation

<table>
<thead>
<tr>
<th>SARA 311/312 Hazards</th>
<th>Fire Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERCLA Reportable Quantity</td>
<td>This material does not contain any components with a CERCLA RQ</td>
</tr>
<tr>
<td>SARA 302 Reportable Quantity</td>
<td>This material does not contain any components with a SARA 302 RQ</td>
</tr>
<tr>
<td>SARA 302 Threshold Planning Quantity</td>
<td>SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302</td>
</tr>
<tr>
<td>SARA 3024 Reportable</td>
<td>This material does not contain any components with a section #)$ EHS RQ</td>
</tr>
</tbody>
</table>
SARA 313 Ingredients: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

Clean Air Act

Ozone-Depletion Potential

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know
No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right to Know
No components are subject to the New Jersey Right to Know Act

California Prop 65 Ingredients
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH On the inventory, or in compliance with the inventory
United States of America TSCA On the inventory, or in compliance with the inventory
Canada DSL On the inventory, or in compliance with the inventory
Australia AICS On the inventory, or in compliance with the inventory
New Zealand NZIoC Not in compliance with the inventory
Japan ENCS On the inventory, or in compliance with the inventory
Korea KECI On the inventory, or in compliance with the inventory
Philippines PICCS On the inventory, or in compliance with the inventory
China IECSC On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

NFPA Classification

Health Hazard: 1 Fire Hazard: 1 Reactivity Hazard: 0

Further information
Legacy SDS Number 29020

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,
transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

KEY OR LEGEND TO ABBREVIATIONS USED IN THE SDS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List Agency</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List Occupational</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Assoc</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>GHS ACT</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemicals Substances</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-Term Exposure Limit</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition Complex Reaction Products and Biological Materials</td>
</tr>
</tbody>
</table>

SDS: ODORLESS MINERAL SPIRITS

Page: 11
<= LESS THAN OR EQUAL TO

LC50 LETHAN CONCENTRATION 50%

Date Created: 4/28/2015
Date Updated: 2/5/2016
1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: PARTALL® Hi-Temp Wax

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Mold release agent

1.3 Details of the supplier of the safety data sheet
Company: REXCO
P.O. Box 80996
Conyers, Georgia 30013
U.S.A.
Telephone: +1 770 483 7610
Fax: +1 770 483 8550
Email: info@rexco-usa.com

1.4 Emergency telephone number
ChemTrec (24 hour): 1-800-424-9300 (USA and Canada)
+1-703-527-3887 (Outside USA and Canada; collect calls accepted)

2. Hazards identification

2.1 Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Hazard Statement Code</th>
<th>Hazard Class</th>
<th>Hazard Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>H304</td>
<td>Aspiration hazard</td>
<td>1</td>
</tr>
</tbody>
</table>

2.2 Label Elements
Signal word: Danger

Hazard pictograms:

Hazard statements

<table>
<thead>
<tr>
<th>Hazard Statement Code</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
</tbody>
</table>
Precautionary statements

<table>
<thead>
<tr>
<th>Precautionary Statement Code</th>
<th>Precautionary Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>P301 + P310</td>
<td>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician</td>
</tr>
<tr>
<td>P331</td>
<td>Do NOT induce vomiting</td>
</tr>
<tr>
<td>P501</td>
<td>Dispose of contents/container to an approved waste disposal plant in accordance with local, regional, and national regulations.</td>
</tr>
</tbody>
</table>

3. Composition/information on ingredients

3.2 Mixtures

Chemical nature: Mixture

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Classification</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td>265-149-8</td>
<td>H304: Aspiration, toxic, 1</td>
<td>≥ 55 - ≤ 65</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1 Description of first aid measures

General advice: Do not leave victim unattended. Show this safety data sheet to doctor in attendance.

In case of eye contact: Flush immediately with cold water for 15 minutes. Remove contact lenses. Keep eye wide open while rinsing. Get prompt medical attention.

In case of skin contact: Remove contaminated clothing and wash affected area with soap and warm water. If irritation persists, seek medical attention. Launder contaminated clothing and shoes prior to reuse.

If inhaled: Expose individual to fresh air and/or oxygen if light-headed or having difficulty breathing. If difficulty breathing persists, seek medical attention.

If swallowed: Seek immediate medical attention. Do not induce vomiting. If spontaneous vomiting occurs keep victim’s head below hips to prevent aspiration into lungs. Do not leave individual unattended.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Standard procedure for chemical fires. Use dry chemicals or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Water may be unsuitable as an extinguishing media but helpful in keeping adjacent areas cool. Avoid spreading burning liquid with water used for cooling purposes.
5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear self-contained breathing apparatus with full face piece and protective clothing. Avoid contact with skin and eyes.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation. Keep sources of ignition and hot metal surfaces isolated from spill.

6.2 Environmental precautions

Prevent product from entering drains. Stop spill at source and prevent further leakage or spillage if safe to do so. If product contaminates rivers and lakes or drains, notify proper authorities.

6.3 Methods and materials for containment and cleaning up

Confine spill and place into suitable, closed container for disposal. Dispose of in accordance with regional, national, and local laws and regulations.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: For personal protection see Section 8. Smoking, eating, and drinking should be prohibited in the application area. Avoid contamination of tobacco products when handling this material. Inhalation of vapors in the presence of tobacco products can result in polymer fume fever. Empty containers may contain product residue such as vapors; continue to observe safe handling precautions.

Advice on protection against fire and explosion: Normal measures for preventive fire protection. Keep work areas free of hot metal surfaces and other sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Store in cool dry location below 90 °F (32 °C) and away from open flames, heat, and sparks. Keep container tightly closed when not in use. Observe label precautions.

8. Exposure controls/personal protection

8.1 Control parameters

No specific data available for this product.
8.2 Exposure controls

Use with adequate ventilation.

**Personal protective equipment**

Hand protection: Wear chemical resistant impervious gloves.

Eye protection: Safety glasses with side shields or goggles are recommended. Eye wash stations are recommended for the work area.

Skin and body protection: Wear impervious clothing and shoes. Safety showers are recommended for the work area.

Respiratory protection: Provide sufficient general and/or local exhaust.

Hygiene measures: Do not eat, drink, or smoke while using. Wash hands before breaks and at the end of workday.

**Environmental exposure controls**

Prevent product from entering drains. Stop spill at source and prevent further leakage or spillage if safe to do so. If product contaminates rivers and lakes or drains, notify proper authorities.

---

**9. Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Appearance: white solid paste wax

Odour: aliphatic

Odour threshold: no data available

pH: no data available

Melting point/freezing point: 120 °F (48 °C) / no data available

Initial boiling point and boiling range: 375 °F – 410 °F (190 °C – 210 °C)

Flash point: >142 °F (>61 °C)

Evaporation rate: no data available

Flammability: no data available

Upper/lower flammability or explosive limits: no data available

Vapour pressure: no data available

Vapour density: no data available

Relative density: 0.76 – 0.80 (Water = 1)

Solubility(ies): immiscible in water

Partition coefficient: n-octanol/water: no data available
Auto-ignition temperature: no data available
Decomposition temperature: no data available
Viscosity: no data available
Volatile organic content (actual VOC): 527 g/L

10. Stability and reactivity

10.1 Reactivity
Not reactive under normal conditions of use.

10.2 Chemical stability
Stable under normal conditions of use.

10.3 Possibility of hazardous reactions
No decomposition if stored and applied as directed.

10.4 Conditions to avoid
Avoid heat, sparks, open flames, hot surfaces, or other sources of ignition.

10.5 Incompatible materials
Incompatible with strong oxidizing agents, strong acids or bases, alkali metals, halogens, and strong alkalis.

10.6 Hazardous decomposition products
Hazardous decomposition products are not expected to form during normal storage. Normal combustion will produce carbon dioxide and water vapor. Incomplete combustion will produce carbon monoxide and other toxic substances.

11. Toxicological information
No data specific to this product is available.

11.1 Information on toxicological effects
Acute toxicity: no data available
Skin corrosion/irritation: expected to be slightly irritating
Serious eye damage/irritation: expected to be slightly irritating
Respiratory or skin sensitization: not a skin sensitizer
Germ cell mutagenicity: not considered a mutagenic hazard
Carcinogenicity: not classified as a carcinogen.
Reproductive toxicity: not expected to impair fertility or fetal development.
STOT-single exposure: no data available
STOT-repeated exposure: no data available
12. Ecological information
No data specific to this product is available.

12.1 Toxicity
Not expected to be toxic

12.2 Persistence and degradability
Expected to be inherently biodegradable.

12.3 Bioaccumulative potential
No data available

12.4 Mobility
No data available

12.5 Result of PBT and vPvB assessment
No data available

12.6 Other adverse effects
No other adverse effects expected.

13. Disposal considerations
Dispose of in accordance with regional, national, and local laws and regulations.

13.1 Waste treatment methods
Material disposal: Do not dispose of waste into sewer. Do not contaminate ponds, waterways, or ditches with product or used container. Send to a licensed waste management company.
Container disposal: Empty remaining contents. Dispose of as unused product. Do not reuse empty containers.

14. Transport information
This product is not classified as a dangerous good for transport by road, rail, inland waterways, ocean, or air.

15. Regulatory information
15.1 Safety, health, and environmental regulations/legislation specific to the substance or mixture
None
16. Other information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not be construed as guaranteeing any specific property of the product. REXCO makes no warranty of any kind, express or implied, including warranties of merchantability or fitness for a particular purpose, concerning the safe use of this material in your process or in combination with other substances. Users should make their own tests and assessments as to the suitability of this product or the information contained herein for their particular purposes and uses.
SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME                PARTALL® Paste #2
GENERIC NAME                Wax polishing compound

MANUFACTURER                REXCO
                            P.O. Box 80996
                            Conyers, Georgia 30013
                            USA

TRANSPORTATION EMERGENCY:
CHEMTREC (800) 424-9300 U.S.A. (24 hours/day)
CHEMTREC (703) 527-3887 International (Collect calls accepted)

CUSTOMER SERVICE AND PRODUCT EMERGENCY:
REXCO (800) 888-1060 U.S.A and Canada
REXCO (770) 483-7610 International

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>CONCENTRATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Petroleum Distillate</td>
<td>64742-47-8</td>
<td>64 – 72</td>
</tr>
<tr>
<td>Paraffin Wax</td>
<td>8002-74-2</td>
<td>18 – 22</td>
</tr>
<tr>
<td>Microcrystalline Wax</td>
<td>64742-42-3</td>
<td>8 – 11</td>
</tr>
<tr>
<td>Oxidized Ethene Homopolymer</td>
<td>68609-21-2</td>
<td>2 – 3</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

NFPA RATING: Health 1, Fire 2, Reactivity 0
HMIS RATING: Health 1, Fire 2, Reactivity 0
0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=HIGH, 4=EXTREME

POTENTIAL HEALTH EFFECTS

EYES
Can cause eye irritation. Prolonged or repeated exposure may result in conjunctiva.

SKIN
May cause skin irritation. Prolonged or repeated exposure may result in defatting, skin dermatitis.

INHALATION
Repeated or prolonged exposure may cause central nervous system depression, including headache, dizziness, loss of coordination, unconsciousness.

INGESTION
Can cause nausea and vomiting with danger of Chemical Pneumonia.
CHRONIC HEALTH EFFECTS: Possible central nervous system depression and skin dermatitis.

SYMPTOMS OF EXPOSURE: Symptoms of exposure through inhalation, ingestion, or direct contact with skin may include nausea, vomiting, diarrhea, irritation of nose, throat, airways, or skin, central nervous system depression – possibly including headache, loss of coordination, drowsiness, fatigue, and unconsciousness – and death in extreme cases. Pre-existing eye, skin, or respiratory disorders may be aggravated by exposure to this product.

PRINCIPAL ROUTES OF ENTRY: Skin contact, skin absorption, eye contact, and inhalation

CANCER INFORMATION: Neither this product nor any of its components is listed as a carcinogen or partial carcinogen by the following agencies: the National Toxicology Program, the International Agency for Research on Cancer, and the Occupational Safety and Health Administration.

SECTION 4: FIRST AID MEASURES

EYES: Flush immediately with cold water for 15 minutes and seek medical attention.

SKIN: Remove contaminated clothing and wash affected area with soap and hot water. If irritation from contact persists, seek medical attention. Launder contaminated clothing – including shoes – prior to reuse.

INHALATION: If light-headed or having difficulty breathing, expose individual to fresh air and/or oxygen. If breathing stops, begin artificial respiration and seek immediate medical attention.

INGESTION: Seek immediate medical attention. DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration into lungs. If possible, do not leave victim unattended.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT / METHOD: >142 °F (>61 °C) / Tagliabue Closed Cup method (TCC)

AUTO IGNITION TEMPERATURE: 440 °F (226 °C)

FLAMMABLE LIMITS IN AIR (% BY VOLUME): LEL Lower 0.9% / UEL Upper 6.0%

FIRE AND EXPLOSION HAZARDS: Low flash point. Keep work areas free of hot metal surfaces and other sources of ignition.

EXTINGUISHING MEDIA: Use dry chemicals, CO₂, water fog, water spray, or foam.

FIRE FIGHTING INSTRUCTIONS: Wear a NIOSH-approved self contained breathing apparatus in positive pressure mode and full bunker gear. Water may be unsuitable as an extinguishing media but helpful in keeping adjacent containers cool in order to prevent container rupture. Avoid spreading burning liquid with water used for cooling purposes.
SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL: Keep sources of ignition and hot metal surfaces isolated from spill. Persons involved in clean-up should wear personal protection equipment. Stop spill at source and prevent from spreading. If spilled as a solid, scrape and then sweep up spilled material. If spilled as a free-flowing liquid, confine spill and allow liquid to solidify prior to clean-up. If run-off occurs, notify proper authorities as required. Place in chemical waste container and dispose of in accordance with local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

Store in a cool, dry location at 90 °F (32 °C) or below and away from open flames, heat, and sparks. Keep work areas free of hot metal surfaces and other sources of ignition. Keep container tightly closed when not in use to prevent drying out of material.

Repack only into high-density polyethylene (HDPE). Containers used for repackaging should be thoroughly tested for long-term product compatibility before use. All new containers must exhibit product labels required for proper identification, safety, handling, and storage. Empty containers may contain product residue such as vapors – continue to observe proper handling and storage precautions.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses, goggles, or face shield are advised. Eye washes are recommended for work areas.

SKIN PROTECTION: Wear impervious gloves, clothing, and shoes to prevent skin contact. Safety showers are recommended for work areas. Remove contaminated clothing and wash in hot water and soap prior to reuse.

RESPIRATORY PROTECTION: Exposure levels should be kept below the PEL or TLV for this product. If exposure exceeds recommended levels, use of NIOSH-approved cartridge respirator or gas mask is advised. Engineering controls should be implemented if necessary to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient general and/or local exhaust (explosion-proof ventilation) to keep exposure below PEL or TLV.

EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Petroleum Distillate</td>
<td>100 ppm PEL/TWA</td>
<td>100 ppm TLV/TWA</td>
</tr>
<tr>
<td>Paraffin Wax</td>
<td>None Established</td>
<td>None Established</td>
</tr>
<tr>
<td>Microcrystalline Wax</td>
<td>None Established</td>
<td>None Established</td>
</tr>
<tr>
<td>Oxidized Ethene Homopolymer</td>
<td>None Established</td>
<td>None Established</td>
</tr>
</tbody>
</table>

Threshold limit for wax fumes is 2 mg/m³ in air for 8-hour workday. Avoid generation and inhalation of wax fumes.

PEL = PERMISSIBLE EXPOSURE LIMITS  TLV = THRESHOLD LIMIT VALUE  TWA = TIME WEIGHTED AVERAGE (8 HOURS)
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White or Green Paste Wax
ODOR: Solvent
BOILING POINT: 310 - 410 °F (154 - 210 °C)
MELTING POINT: 120 °F (48 °C)
V.O.C. (BY % CALCULATION): 533 g/L

SPECIFIC GRAVITY (H₂O=1): 0.788
VAPOR PRESSURE (mm Hg): 3.0
VAPOR DENSITY (AIR=1): 1.4
SOLUBILITY IN WATER: No
REACTIVITY IN WATER: No

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Open flames, hot surfaces, or any ignition source.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids or bases, alkali metals, halogens, and strong alkalis.

HAZARDOUS DECOMPOSITION: Normal combustion forms carbon dioxide and water vapor. Incomplete combustion will produce carbon monoxide and other toxic substances.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

No data available specific to this product. Following is data as pertains to one or more major ingredients:

EYES: Primary Eye Irritation Index (Rabbits): Maximum average score = 3.3 (Maximum score is 110)
SKIN: Primary Skin Irritation Index (Rabbits): 2.2 (Maximum score is 8.0)
Acute Dermal LD50 (Rabbit): 2.0 – 4.0 g/kg for similar products
INHALATION: LC50 (Rat): (male and female) > 6.8 mg/L
INGESTION: Acute Oral LD50 (Rat): > 5 g/kg

SECTION 12: ECOLOGICAL INFORMATION

Product would not be expected to cause damage to the environment and is inherently biodegradable. Product would be expected to biodegrade slowly, depending upon conditions to which it is exposed.
SECTION 13: DISPOSAL CONSIDERATIONS

Waste material may be incinerated at an approved facility where permitted under appropriate Federal, State, and Local regulations.

SECTION 14: TRANSPORT INFORMATION

DOT CLASSIFICATION: This product is not regulated for transportation.

ICAO / IATA CLASSIFICATION: This product is not regulated for transportation.

IMDG CLASSIFICATION: This product is not regulated for transportation.

SECTION 15: REGULATORY INFORMATION

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT OF 1980 (CERCLA)
Contains no chemicals on the CERCLA hazardous chemicals list.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III
- SARA 302: Contains no chemicals subject to SARA 302 reporting
- SARA 311/312 HAZARD CATEGORIES: Not hazardous
- SARA 313: Contains no chemicals subject to SARA 313 reporting

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) CLASSIFICATION: Not applicable

CALIFORNIA PROPOSITION 65: Contains no detectable quantities of Proposition 65 chemicals.

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) CLASSIFICATION: Not regulated

CHEMICAL INVENTORY: This product is not listed on regulatory inventories or listings. Components are either listed on the following chemical inventories or qualify for an exemption:

- UNITED STATES: Toxic Substances Control Act (TSCA)
- CANADA: Canadian Domestic Substance List (DSL)
- EUROPE: European Inventory of Existing Commercial Chemical Substances (EINECS)
- AUSTRALIA: Australian Inventory of Chemical Substances (AICS)
- JAPAN: Existing and New Chemical Substances (ENCS)
- KOREA: Existing Chemicals List (ECL)
- PHILIPPINES: Philippines Inventory of Chemicals and Chemical Substances (PICCS)
SECTION 16: OTHER INFORMATION

All information provided in this Material Safety Data Sheet is believed to be accurate and reliable. REXCO makes no warranty of any kind, express or implied, including warranties of merchantability or fitness for a particular purpose, concerning the safe use of this material in your process or in combination with other substances. Users should make their own tests and assessments as to the suitability of this product or the information contained herein for their particular purposes and uses.

Prepared by: REXCO Product Stewardship Department
Material Safety Data Sheet
Mold Max® Series
MSDS No. 814
Date Of Preparation: August 25, 2014
Revision: 0009

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Mold Max® 10, 10T, 15T, 20, 25, 27T, 30, 40 and XLS II Part A
General Use: Silicone Elastomer
Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042
Phone (610) 252-5800, FAX (610) 252-6200
Emergency Contact: Chem-Tel
    Domestic 800-255-3924
    International 813-248-0585

Section 2 - Hazards Identification


Section 3 - Composition / Information on Ingredients

No hazardous ingredients

Section 4 - First Aid Measures

Inhalation: Remove source(s) of contamination and move victim to fresh air.
Eye Contact: Flush eyes with plenty of water. If irritation persists, seek medical attention.
Skin Contact: In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse.
Ingestion: Do not induce vomiting unless instructed by a physician. Contact physician immediately
After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

Flash Point: >300 °F
Flash Point Method: PMCC
LEL: Not Established
UEL: Not Established
Flammability Classification: Non-Flammable
Extinguishing Media: Dry Chemical, Carbon Dioxide, and Foam
Unusual Fire or Explosion Hazards: None
Fire-Fighting Instructions: Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.
Section 6 - Accidental Release Measures

Spill /Leak Procedures: Dike and contain spill; absorb or scrape up excess into suitable container for disposal. Stop or reduce discharge if it can be done safely.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective equipment. Use good general housekeeping procedures.

Storage Requirements: Store in cool dry, well-ventilated area.

Section 8 - Exposure Controls / Personal Protection

Respiratory Protection: Follow OSHA respirator regulations 29 CFR 1910.134 and European Standard EN 149; wear an MSHA/NIOSH or European Standard EN149 approved respirator.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Viscous Liquid
Appearance: off-white viscous liquid
Odor: Mild odor
Vapor Pressure: None (Polymeric Resin)
Vapor Density (Air=1): >1
Specific Gravity (H2O=1, at 4 °C): 1.2
Water Solubility: Insoluble
Boiling Point: None (Polymeric Resin)
% Volatile: Nil
Freezing/Melting Point: None (Polymeric Resin)
Viscosity: 600 poise
Evaporation Rate: Not Applicable

Section 10 - Stability and Reactivity

Stability: These products are stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization can not occur.
Chemical Incompatibilities: Strong bases, and acids.
Hazardous Decomposition Products: Silica, carbon monoxide and carbon dioxide
Section 11 - Toxicological Information

**Eye Effects:** Irritation

**Skin Effects:** Irritation

**Carcinogenicity:** None Determined

**Mutagenicity:** None Determined

**Teratogenicity:** None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

**Disposal:** Must be disposed of in accordance with applicable Federal, state and local regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>DOT</th>
<th>IATA</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Regulated</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

**United States Regulations**

**EPA Regulations:**

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

SARA Toxic Chemical (40 CFR 372.65): None

These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

**TSCA Inventory Status (40 CFR710):** All components of this formulation are listed in the TSCA Inventory.

California Proposition 65: These products do not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm

**CANADA Regulations**

WHMIS Identification: **Not controlled**

CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): **All are Listed**

**Labeling according to EEC Directive**

No special packaging or labeling requirements
Section 16 - Other Information

Disclaimer: The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

Material Safety Data Sheet

Mold Max® Series  
MSDS No. 814

Date Of Preparation: August 25, 2014  
Revision: 0009

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Mold Max® 10, 10T, 15T, 20, 25, 27T, 30, 40 and XLS II Part B
General Use: Silicone Elastomer
Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042
Phone (610) 252-5800, FAX (610) 252-6200
Emergency Contact: Chem-Tel
  Domestic        800-255-3924
  International   813-248-0585

Section 2 - Hazards Identification

Hazard Designations:

Europe
Canada

Information pertaining to particular dangers

R22: Harmful if swallowed.
R36/37/38: Irritating to eyes, respiratory system and skin.
R52/53: Harmful to aquatic organisms may cause long term adverse effects in the aquatic environment.

Classified according to Articles 6 & 7 of Directive 1999/45/EC

Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TWA</th>
<th>OSHA PEL</th>
<th>Hazard Designation</th>
<th>Weight Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary Silanes Mixture</td>
<td>None Established</td>
<td>None Established</td>
<td>Xi</td>
<td>20-25</td>
</tr>
<tr>
<td>Dimethyltin dineodecanoate</td>
<td>None Established</td>
<td>None Established</td>
<td>Xn</td>
<td>2-5</td>
</tr>
</tbody>
</table>
  CAS No.: 68928-76-7
  EC No.: 273-028-6

Section 4 - First Aid Measures

Inhalation: Remove source(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.
Eye Contact: Flush eyes with plenty of water. If irritation persists, seek medical attention.
Skin Contact: In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse; seek medical attention if rash develops.
Ingestion: Do not induce vomiting unless instructed by a physician. Contact physician immediately.

After first aid, get appropriate in-plant, paramedic, or community medical support.
### Section 5 - Fire-Fighting Measures

<table>
<thead>
<tr>
<th>Flash Point:</th>
<th>&gt;150°F (65.5°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEL:</td>
<td>Not Established</td>
</tr>
<tr>
<td>EL:</td>
<td>Not Established</td>
</tr>
<tr>
<td>Flash Point Method:</td>
<td>PMCC</td>
</tr>
<tr>
<td>Flammability Classification:</td>
<td>Combustible Liquid</td>
</tr>
<tr>
<td>Extinguishing Media:</td>
<td>Dry Chemical, Carbon Dioxide, and Foam</td>
</tr>
<tr>
<td>Unusual Fire or Explosion Hazards:</td>
<td>On combustion, silica, tin oxide and carbon dioxide are emitted.</td>
</tr>
</tbody>
</table>

**Fire-Fighting Instructions:** Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

### Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** Evacuate area. Eliminate all sources of ignition. Put on appropriate protective gear including NIOSH/MSHA approved self-contained breathing apparatus, rubber boots and heavy rubber gloves. Absorb on vermiculite Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

### Section 7 - Handling and Storage

**Handling Precautions:** Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective equipment. If ventilation is not sufficient, wear proper respiratory equipment. Reseal partial containers. Use good general housekeeping procedures.

**Storage Requirements:** Store in cool dry, well-ventilated area.

### Section 8 - Exposure Controls / Personal Protection

**Respiratory Protection:** Follow OSHA respirator regulations 29 CFR 1910.134 and European Standard EN 149; wear an MSHA/NIOSH or European Standard EN149 approved respirator. **Warning!** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/Equipment:** Wear chemically protective gloves and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.
Section 9 - Physical and Chemical Properties

Physical State: Colored liquid
Appearance: Colored liquid
Odor: Sweet odor
Vapor Pressure: Not Available
Vapor Density (Air=1): Not Applicable
Specific Gravity (H₂O=1, at 4 °C): 1.0

Water Solubility: Insoluble
Boiling Point: >412°F (>211°C)
% Volatile: Not Available
Freezing/Melting Point: Not Applicable
Evaporation Rate: Not Applicable

Section 10 - Stability and Reactivity

Stability: These products are stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization can not occur.
Chemical Incompatibilities: Strong acids, bases, and oxidizers.
Hazardous Decomposition Products: Silica, tin oxide carbon monoxide and carbon dioxide.

Section 11 - Toxicological Information

Eye Effects: Irritation
Skin Effects: Irritation
Carcinogenicity: None Determined
Mutagenicity: None Determined
Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: Must be disposed of in accordance with applicable Federal, state and local regulations.

Section 14 - Transport Information

DOT: Not Regulated
IATA: Not Regulated
IMDG: Not Regulated

Section 15 - Regulatory Information

United States EPA Regulations:

US TSCA Inventory Status (40 CFR 710): All components of this product are listed on the TSCA inventory.

These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

California Proposition 65: These products do not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.
Section 15 - Regulatory Information (continued)

Canadian Regulations;

WHMIS Identification: **D2A**
CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): **Listed on CDSL**

Labeling according to EEC Directive

<table>
<thead>
<tr>
<th>Risk Phrases</th>
<th>Symbol(s) Required for EU Label</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>R22: Harmful if swallowed.</td>
<td></td>
<td><strong>S2</strong>: Keep out of reach of children.</td>
</tr>
<tr>
<td>R36/37/38: Irritating to eyes, respiratory system and skin.</td>
<td></td>
<td><strong>S26</strong>: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</td>
</tr>
<tr>
<td>R52/53: Harmful to aquatic organisms may cause long term adverse effects in the aquatic environment</td>
<td><strong>Xi = Irritant</strong></td>
<td><strong>S28</strong>: After contact with skin, wash immediately with plenty of soap-suds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>S/37/39</strong>: Wear suitable gloves and eye/face protection.</td>
</tr>
</tbody>
</table>

Section 16 - Other Information

Disclaimer: The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Ease Release® 200, 300, 400, 500, 700, 2300, and 2910  
General Use: Mold Release Agents  
Manufacturer: Mann Release Technologies, Inc.,  
5600 Lower Macungie Rd., Macungie, PA 18062  
Phone (610) 252-5800, FAX (610) 252-6200  
Emergency Contact: Chem-Tel  
Domestic: 800-255-3924  International: 813-248-0585

Section 2 - Hazards Identification

Classification of the substance or mixture

Pictogram(s):  
Signal Word: Warning

GHS Label elements, including precautionary statements

Physical Hazards:  
H223+H229 Flammable aerosol. Pressurized container: may burst if heated.

Prevention Precautions:  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

Storage Precautions:  
P410 + Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Hazards not otherwise classified (HNOC) or not covered by GHS -

Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>115-10-6</td>
<td>Dimethyl ether</td>
<td>25% - 50%</td>
</tr>
<tr>
<td>75-37-6</td>
<td>1,1-difluoroethane</td>
<td>25% - 50%</td>
</tr>
</tbody>
</table>

Section 4 - First Aid Measures

Inhalation: Remove source(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.
Eye Contact: Flush eyes with plenty of water. If irritation persists, seek medical attention.
Skin Contact: In case of skin contact, wash thoroughly with soap and water.
Ingestion: Do not induce vomiting unless instructed by a physician. Never give anything by mouth to an unconscious person.

After first aid, get appropriate in-plant, paramedic, or community medical support.
Because of possible disturbance of cardiac rhythm, catecholamine drugs, such as epinephrine, should only be used in situations of emergency life support.

### Section 5 - Fire-Fighting Measures

**Flammable Classification:** Combustible  
**Extinguishing Media:** Water Fog, Dry Chemical, and Carbon Dioxide Foam  
**Unusual Fire or Explosion Hazards:** None known.

**Fire-Fighting Instructions:** Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off “fuel” to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.

**Further information:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure demand or positive-pressure mode.

### Section 6 - Accidental Release Measures

**Spill /Leak procedures:** Avoid breathing vapors. Only properly protected personnel should remain in the spill area; dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely.

**Environmental precautions:** Prevent discharge from entering drains.

### Section 7 - Handling and Storage

**Handling Precautions:** Use good general housekeeping procedures. Wash hands after use.

**Storage Requirements:** Keep container(s) tightly closed and properly labeled. Store in cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.

### Section 8 - Exposure Controls / Personal Protection

**Respiratory Protection:** Respiratory protection is not normally required when using this product with adequate ventilation. Should a respirator be needed, follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators equipped with organic vapor cartridges.

**Hand Protection:** Should hand protection be needed, wear any liquid-tight gloves such as butyl rubber, neoprene or PVC.
**Eye Protection:** Safety glasses with side shields per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Other Protective Clothing/Equipment:** Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wash thoroughly after handling.

**Section 9 - Physical and Chemical Properties**

- **Appearance:** aerosol
- **Odor/Threshold:** slight ethereal
- **pH:** N.A. (non-aqueous)
- **Melting Point/Frozen Point:** N.A.
- **Low/High Boiling Point:** N.A.
- **Flash Point:** >300 °F
- **Evaporation Rate:** Not available
- **Flammability:** nonflammable aerosol
- **UEL/LEL:** Not available
- **Vapor Pressure:** 518 mmHg @ 70 °F
- **Vapor Density (Air=1):** ~4
- **Specific Gravity (H2O=1, at 4 °C):** NA
- **Water Solubility:** negligible
- **Partition coefficient:** Not available
- **Auto-ignition temperature:** Not available
- **Decomposition temperature:** Not available
- **Vapor Pressure:** 518 mmHg @ 70 °F
- **Vapor Density (Air=1):** ~4
- **Specific Gravity (H2O=1, at 4 °C):** NA
- **Water Solubility:** negligible
- **Partition coefficient:** Not available
- **Auto-ignition temperature:** Not available
- **Decomposition temperature:** Not available
- **% Volatile:** 497 g/l

**Section 10 - Stability and Reactivity**

**Stability:** These products are stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization cannot occur.

**Chemical Incompatibilities:** Strong bases, and acids.

**Hazardous Decomposition Products:** Thermal oxidative decomposition can produce carbon oxides and traces of incompletely burned carbon compounds.

**Section 11- Toxicological Information**

- **Skin Corrosion/Irritation:** no data
- **Respiratory/Skin Sensitization:** no data
- **Carcinogenicity:** no data
- **Specific Target Organ Toxicity – Single Exposure:** no data
- **Specific Target Organ Toxicity – Repeated Exposure:** no data
- **Aspiration Hazard:** no data
- **Chronic Exposure:** no data
- **Serious Eye Damage/Irritation:** no data
- **Germ Cell Mutagenicity:** no data
- **Reproductive Toxicity:** no data
- **Acute Toxicity:** no data
- **Potential Health Effects – Miscellaneous:** no data

**Section 12 - Ecological Information**

- **Toxicity:** no data
- **Persistence and Degradability:** no data
- **Bioaccumulative Potential:** no data
- **Mobility in Soil:** no data
- **Other Adverse Effects:** no data

**Section 13 - Disposal Considerations**

**Disposal:** Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.
Empty containers retain product residue which may exhibit hazards of material, therefore to not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>DOT</th>
<th>IATA</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipping Name:</strong> Aerosols, flammable</td>
<td><strong>Shipping Name:</strong> Aerosols, flammable</td>
<td><strong>Shipping Name:</strong> Aerosols, flammable</td>
</tr>
<tr>
<td><strong>UN:</strong> 1950</td>
<td><strong>UN:</strong> 1950</td>
<td><strong>UN:</strong> 1950</td>
</tr>
<tr>
<td><strong>HC:</strong> 2.1</td>
<td><strong>HC:</strong> 2.1</td>
<td><strong>HC:</strong> 2.1</td>
</tr>
<tr>
<td><strong>Limited Quantity = 1 L</strong></td>
<td><strong>Limited Quantity = 1 L</strong></td>
<td><strong>Limited Quantity = 1 L</strong></td>
</tr>
</tbody>
</table>

EmS: F-D,S-U

Section 15 - Regulatory Information

**TSCA Inventory Status (40 CFR710):** All components of this formulation are listed in the TSCA Inventory.

**California Proposition 65:** This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

16 - Other Information

**HMIS**
- **H:** 2
- **F:** 2
- **R:** 0

**NFPA**
- **2**
- **2**
- **0**
- **0**

**Revision:** 14
**Date Prepared:** June 8, 2015

**Glossary:** ACGIH-American Conference of Governmental Industrial Hygienists; ANSI-American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS-Chemical Abstract Service; Chemtrec-Chemical Transportation Emergency Center (US); CHIP-Chemical Hazard Information and Packaging; DSL-Domestic Substances List; EC-Equivalent Concentration; EH40 (UK)-HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA-Emergency Planning and Community Right-To-Know Act; ESL-Effects screening levels; GHS-Globally Harmonized System of Classification and Labelling of Chemicals; HMIS-Hazardous Material Information Service; IATA-International Air Transport Association; IMDG-International Maritime Dangerous Goods Code; LC-Lethal Concentration; LD-Lethal Dose; LEL-Lower Explosion Level; NFPA-National Fire Protection Association; OEL-Occupational Exposure Limit; OSHA-Occupational Safety and Health Administration, US Dept. of Labor; PEL-Permissible Exposure Limit; SARA (Title III)-Superfund Amendments and Reauthorization Act; SARA 313-Superfund Amendments and Reauthorization Act, Section 313; SCBA-Self-Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ-Texas Commission on Environmental Quality; TLV-Threshold Limit Value; TSCA-Toxic Substances Control Act Public Law 94-469; TWA-Time Weighted Value; UEL-Upper Explosion Level; US DOT-US Department of Transportation; WHMIS-Workplace Hazardous Materials Information System.
Disclaimer: The information contained in this Safety Data Sheet (SDS) is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.


Classifications of the chemical in accordance with 29 CFR 1910.1200, signal word, hazard and precautionary statement(s), symbol(s) and other information are based on listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS and EC No 1907/2006 and are considered trade secrets under US Federal Law (29 CFR and 40 CFR), Canadian Law (Health Canada Legislation), and European Union Directives.
MATERIAL SAFETY DATA SHEET (MSDS)

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: RHINO™ 3176 Epoxy Hardener
CHEMICAL FAMILY: Polyethylene polyamine
MFR'S NAME: Rhino Linings, 9151 Rehco Road, San Diego, CA 92121
EMERGENCY PHONE: 800/424--9300 (Chemtrec) GENERAL INFORMATION: 858/410-6044 (Rhino)

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>%</th>
<th>CAS #</th>
<th>EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylenepolyamine</td>
<td>&lt;65</td>
<td>029320-38-5</td>
<td>N/E</td>
</tr>
<tr>
<td>Tetraethylenepentamine</td>
<td>&lt;25</td>
<td>000112-57-2</td>
<td>N/E</td>
</tr>
<tr>
<td>Proprietary ingredients</td>
<td>&gt;10</td>
<td>Trade secret</td>
<td>N/E</td>
</tr>
</tbody>
</table>

Section 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Epoxy hardener solution. Certain individuals may have pre-existing skin or respiratory conditions causing a sensitivity or allergy which manifests as various reactions. Heating or spraying this product or the mixed parts increases potential health hazards. Health and Safety personnel should examine handling procedures and remedy existing and potential health and safety hazards.

POTENTIAL HEALTH EFFECTS:

EYE:  
- May cause irritation.

SKIN:  
- May cause irritation.

INGESTION:  
- May inflame or damage the G.I. tract. Ingestion may be harmful.

INHALATION:  
- May cause irritation.

CHRONIC EFFECTS:  
- Repeated exposure may cause irritation and sensitization.

SIGNS & SYMPTOMS:  
- Skin rash, irritation, reddening, or eczema; Breathing irritation or difficulty.

Section 4: FIRST AID MEASURES

USE APPROPRIATE BLOOD-BORNE PATHOGENS PROTECTIONS

EYE:  
- Hold eyelids apart and flood with copious amounts of water. Seek medical attention.

SKIN:  
- Remove excess product. Wash thoroughly with soap and water. If irritation persists, seek medical attention.

INGESTION:  
- Do not induce vomiting unless directed by medical personnel. Seek medical attention.

INHALATION:  
- Remove to fresh air. Seek medical attention.

ATTENTION: No representation is made as to the accuracy or correctness of the information contained herein, other than to state that it is presented by this organization in good faith and we believe it to be correct and accurate per the limits of our understanding and training as of the date of first publication. The user or handler of this product is warned to take the most conservative and safest interpretation possible of all information contained herein and to use the most extreme personal protection measures and exposure limitations prudently dictated by the specific usage or handling situation, this MSDS information and good industrial safety and hygiene practices.
Section 5: FIRE FIGHTING MEASURES

NFPA FLAMMABILITY RATING: 1  AUTOIGNITION: N.D.A.
COMBUSTION PRODUCTS: CO, CO₂, NOₓ, & misc. hydrocarbons
SPECIAL HAZARDS: Firefighters should wear butyl rubber boots, gloves, and body suit with SCBA. May generate toxic and irritating combustion products. Use DOT Response Guide #153.
EXISTING MEDIA: Use foam, CO₂, dry chemical, water fog.
FIRE FIGHTER INSTRUCTIONS: Stay upwind. Wear at least full bunker gear and SCBA.

Section 6: ACCIDENTAL RELEASE MEASURES

Isolate spill area. Keep out of sewer and storm drains. Stop the leak and contain the spill. Vacuum, scoop, or absorb spill with non-combustible materials. Clean up spill residues with soap and water.

Section 7: HANDLING AND STORAGE

Avoid skin and eye contact and breathing vapors by appropriate measures. Do not eat or smoke while handling this product. Wash thoroughly with soap and water after handling or exposure to this product.

Store in original sealed container at ambient temperatures (65°C~80°F) in dry, well-ventilated areas.

Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

For Personal exposure Limits (PEL), Threshold Limit Values (TLV), or other exposure limits, see Sec.2. GENERAL: Provide adequate ventilation that will keep airborne concentration at a minimum.
EYE/FACE: Safety glasses or splash goggles with face shield.
SKIN: Chemical resistant gloves. Don chemical resistant clothing where exposure may occur.
RESPIRATORY: NIOSH approved respirator with organic vapor/HEPA filter cartridges.
OTHER: Decontaminate or discard clothing and materials that have come in contact with this product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: amber liquid  ODOR: faint amine  PHYSICAL STATE: liquid
pH: alkaline  VAPOR PRESS: N.D.A.  VAPOR DENSITY: N.D.A.  SPECIFIC GRAVITY: 1.1
BOILING PT: N.D.A.  MELT PT: N/A  SOLUBILITY IN H₂O: moderate

Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
INCOMPATIBILITY: Strong oxidizers, acids, epoxy resins in uncontrolled conditions; contact with other unpolymerized monomers or polymers.
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION: None known, other than Sec. 5’s Combustion Products.

Section 11: TOXICOLOGICAL INFORMATION

Oral: N.D.A.

ATTENTION: No representation is made as to the accuracy or correctness of the information contained herein, other than to state that it is presented by this organization in good faith and we believe it to be correct and accurate per the limits of our understanding and training as of the date of first publication. The user or handler of this product is warned to take the most conservative and safest interpretation possible of all information contained herein and to use the most extreme personal protection measures and exposure limitations prudently dictated by the specific usage or handling situation, this MSDS information and good industrial safety and hygiene practices.
Dermal: N.D.A.
Inhalation: N.D.A.
Carcinogens under OSHA, ACGIH, NTP, IARC, or Other: None ≥ 0.1%.

Section 12: ECOLOGICAL INFORMATION

N.D.A.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with applicable federal, state, and local laws and regulations.

Section 14: TRANSPORT INFORMATION

DOT: Not Regulated
IATA:
IMO:

Section 15: REGULATORY INFORMATION

OSHA: 1910.1200 Hazardous Chemical “Irritant”, “Sensitizer”.
TSCA: Contains listed ingredients.
SARA III: Sec311 & 312 Immediate Health Hazard; Sec313 Chemicals above de minimus level:
CA PROP. 65 NOTICE: Not listed.
VOLATILE ORGANIC COMPOUND (VOC) %: Zero.
NFPA: HEALTH 2  FIRE 1  REACTIVITY 0  OTHER N/A

Section 16: CANADIAN REGULATORY INFORMATION

WHMIS: Hazard Classification: Class D2B Skin Sensitizer. Refer to MSDS for specific warnings.
WHMIS Symbols: Stylized T.
Trade Secrets: N/A.
Hazardous Products Act Information: This product MSDS contains ingredients which are Controlled
and/or on the Ingredient Disclosure List (HPA sections 13 and 14).

ABBREVIATIONS:  N/A = not applicable; N.D.A. = no data available; NE = not established

END OF MSDS

ATTENTION: No representation is made as to the accuracy or correctness of the information contained herein, other
than to state that it is presented by this organization in good faith and we believe it to be correct and accurate per the
limits of our understanding and training as of the date of first publication. The user or handler of this product is warned
to take the most conservative and safest interpretation possible of all information contained herein and to use the
most extreme personal protection measures and exposure limitations prudently dictated by the specific usage or
handling situation, this MSDS information and good industrial safety and hygiene practices.
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: .................................. WEST SYSTEM® 105 Epoxy Resin
APPLICABLE PRODUCT CODES: .................... 105, 105-A, 105-B, 105-C, 105-E, C 105-A, C 105-B, C 105-C, C 105-E
CHEMICAL FAMILY: .................................. Epoxy resin mixture.
INTENDED PRODUCT USES: ......................... Resin for coatings or adhesives.
PRODUCT USE RESTRICTIONS: ...................... None identified.
SDS VERSION: ........................................ 105-2016a

MANUFACTURER: Gougeon Brothers, Inc.
100 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS (24 HRS):
Transportation CHEMTREC: ......................... 800-424-9300 (U.S.)
.......................................................... 703-527-3887 (International)
Non-transportation Poison Hotline: ...................... 800-222-1222

2. HAZARDS IDENTIFICATION

Classification of Substance or Mixture
Skin corrosion/irritation, Category 2
Skin sensitizer, Category 1
Eye damage/irritation, Category 2A
Chronic aquatic toxicity, Category 2

Label Elements

Hazard Pictogram(s):
!

Signal Word
WARNING

Hazard Statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements
Prevention
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
Response
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical attention/advice.
P337 + P313 If eye irritation persists: Get medical attention/advice.
P362 + P364 Take off contaminated clothing and wash it before re-use.
P391 Collect spillage.
Disposal
P501 Dispose of contents/container in accordance with local, regional and international regulations.

Other Hazards Not Resulting In Classification
None known.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS #</th>
<th>CONCENTRATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-polymers</td>
<td>25085-99-8</td>
<td>60-100</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>10-30</td>
</tr>
</tbody>
</table>
WEST SYSTEM® 105 Resin

The exact chemical identity and/or exact percentage (concentration) of each ingredient has been held as confidential business information (CBI). Refer to Section 15 for additional information regarding this CBI claim.

4. FIRST AID MEASURES

**FIRST AID FOR EYES** ................................................................. SYMPTOMS: Causes serious irritation and redness. RESPONSE: Flush immediately with water for at least 15 minutes. Remove contact lenses if present and easy to do. Consult a physician as precautionary measure.

**FIRST AID FOR SKIN** ................................................................. SYMPTOMS: Causes skin irritation. May cause allergic skin reaction and sensitization. RESPONSE: Remove contaminated clothing. Wipe excess from skin. Apply waterless skin cleaner and then wash with soap and water. Consult a physician if effects occur.

**FIRST AID FOR INHALATION** ................................................. SYMPTOMS: Not a likely route of exposure under normal conditions of use. RESPONSE: Remove to fresh air if respiratory irritation occurs and keep comfortable for breathing.

**FIRST AID FOR INGESTION** .................................................. SYMPTOMS: No acute adverse health effects expected from amounts ingested under normal conditions of use. RESPONSE: Seek medical attention if a significant amount is ingested.

5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** .................................................. SUITABLE: Foam, carbon dioxide (CO₂), dry chemical. NON-SUITABLE: Direct water stream.

**FIRE AND EXPLOSION HAZARDS:** ..................................... During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: phenolics, carbon monoxide, and carbon dioxide.

**SPECIAL FIRE FIGHTING PROCEDURES:** ......................... Wear a self-contained breathing apparatus and complete full-body personal protective equipment. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT:** ...... Keep unnecessary and unprotected personnel from entering area. Use appropriate safety and personal protective equipment as indicated in Section 8.

**MITIGATION AND CLEAN UP PROCEDURES:** ................. Stop leak without additional risk. Isolate area. Dike and absorb with inert material (e.g., sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to clean residual.

**ENVIRONMENTAL PRECAUTIONS:** ................................. Prevent from entering into soil, ditches, sewers, waterways and groundwater. See Section 12 for environmental impact information.

7. HANDLING AND STORAGE

**STORAGE TEMPERATURE (min./max.):** .............................. 40°F (4°C) / 120°F (49°C)

**STORAGE:** ......................................................................... Store in cool, dry place. Store in tightly sealed containers to prevent moisture absorption and loss of volatiles. Excessive heat over long periods of time will degrade the resin.

**HANDLING PRECAUTIONS:** .............................................. Avoid all skin and eye contact. Wash thoroughly after handling. Launder contaminated clothing before reuse. Avoid inhalation of vapors from heated product. Precautionary steps should be taken when curing product in large quantities. When mixed with epoxy curing agents this product causes an exothermic, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**EYE PROTECTION GUIDELINES:** ..................................... Safety glasses with side shields or chemical splash goggles.

**SKIN PROTECTION GUIDELINES:** ...................................... Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

**RESPIRATORY/VENTILATION GUIDELINES:** ...................... Use with adequate general ventilation and/or local ventilation to keep exposures below established limits. When ventilation cannot be made adequate enough to keep exposures below established limits, use a NIOSH approved respirator with an organic vapor cartridge, or organic vapor cartridge + P100 particulate filter, depending on specific workplace conditions. Consult with your respirator and cartridge supplier to ensure proper selection of respirator and cartridge based on ingredients listed in Section 3 and specific workplace conditions. Use and select a respirator according the guidelines established in OSHA 1910.134 or other applicable respiratory protection standard.

**ADDITIONAL PROTECTIVE MEASURES:** ......................... Practice good caution and personal cleanliness to avoid skin and eye contact. Avoid skin contact when removing gloves and other protective equipment. Wash thoroughly after handling. Generally speaking, working
cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

**OCCUPATIONAL EXPOSURE LIMITS:** Exposure limits may not be established for this product as a whole. For established exposure limits of specific ingredients in this product, or other available exposure limit information, refer to the table below.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>Exposure Limit Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]- polymers</td>
<td>25085-99-8</td>
<td>No data available</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>10 ppm (AIHA-WEEL)</td>
</tr>
<tr>
<td>Phenol-formaldehyde polymer glycidyl ether</td>
<td>28064-14-4</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9. **PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL FORM</td>
<td>Viscous liquid</td>
</tr>
<tr>
<td>COLOR</td>
<td>Colorless</td>
</tr>
<tr>
<td>ODOR</td>
<td>Mild</td>
</tr>
<tr>
<td>ODOR THRESHOLD</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>MELTING POINT / FREEZING POINT</td>
<td>No data available</td>
</tr>
<tr>
<td>BOILING POINT (760mm/Hg):</td>
<td>&gt; 400°F (204°C)</td>
</tr>
<tr>
<td>FLASH POINT:</td>
<td>&gt;200°F (93°C)</td>
</tr>
<tr>
<td>FLAMMABILITY (solids or gasses)</td>
<td>No data available</td>
</tr>
<tr>
<td>AUTO IGNITION TEMPERATURE</td>
<td>No data available</td>
</tr>
<tr>
<td>LOWER EXPLOSIVE LIMIT (LEL)</td>
<td>No data available</td>
</tr>
<tr>
<td>UPPER EXPLOSIVE LIMIT (UEL)</td>
<td>No data available</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>No data available</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY/DENSITY (water = 1)</td>
<td>1.15</td>
</tr>
<tr>
<td>BULK DENSITY</td>
<td>9.6 lb./gal. (1.15 kg/L)</td>
</tr>
<tr>
<td>VAPOR DENSITY (air = 1)</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>EVAPORATION RATE (Butyl Acetate = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>WATER SOLUBILITY (% BY WT.)</td>
<td>No data available</td>
</tr>
<tr>
<td>PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow)</td>
<td>No data available</td>
</tr>
<tr>
<td>KINETIC VISCOSITY</td>
<td>869.5 mm²/s @ 20°C</td>
</tr>
<tr>
<td>% VOLATILE BY WEIGHT:</td>
<td>ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener SDS for information about the total volatile content of the resin/hardener system.</td>
</tr>
</tbody>
</table>

10. **STABILITY AND REACTIVITY**

STABILITY: Product is stable at normal temperatures and pressures.

REACTIVITY/HAZARDOUS REACTIONS: Product will not react by itself. A mass of more than one pound of product mixed with an aliphatic amine will cause irreversible polymerization with significant heat buildup. Strong acids, bases, amines and mercaptans can cause polymerization.

INCOMPATIBILITIES: Strong acids, bases, amines and mercaptans can cause polymerization. External heating or self-heating could result in rapid temperature increase and pressure build up. If such a condition were to occur in a drum, the drum could expand and rupture violently.

CONDITIONS TO AVOID: Avoid excessive heat.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. **TOXICOLOGICAL AND HAZARD ENDPOINT INFORMATION**

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS#</th>
<th>LD₅₀ Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl], polymers</td>
<td>25085-99-8</td>
<td>&gt;15,000 mg/kg (rat)</td>
<td>&gt;23,000 mg/kg (rabbit)</td>
<td>No data</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>1620 mg/kg</td>
<td>No data</td>
<td>&gt;4.18 mg/l 4 h aerosol</td>
</tr>
<tr>
<td>Phenol-formaldehyde polymer glycidyl ether</td>
<td>28064-74-4</td>
<td>&gt;200 mg/kg (rat)</td>
<td>2,000 mg/kg (rat)</td>
<td>No data</td>
</tr>
</tbody>
</table>

**ACUTE TOXICITY:** No specific toxicity data exists for this mixture. Classification is based on acute toxicity estimation methods using ingredient data.

Oral: Not classified. Does not meet acute oral toxicity criteria.

Dermal: Not classified. Does not meet acute dermal toxicity criteria.

Inhalation: Not classified. Does not meet acute inhalation toxicity criteria. If product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.
SKIN CORROSION / IRRITATION: ...................................................... Causes skin irritation – Category 2.

SERIOUS EYE DAMAGE / IRRITATION: .............................................. Causes serious eye irritation. Category 2A.

REPRODUCTIVE TOXICITY: ............................................................... Not classified. Does not meet criteria for reproductive sensitizer. Repeated exposure to high vapor concentrations may cause irritation of pre-existing lung allergies and increase the chance of developing allergy symptoms to this product.

SKIN SENSITIZATION: ................................................................. May cause allergic skin reaction. Category 1.

REASPIRATORY SENSITIZATION: ................................................ Not classified. Does not meet criteria for respiratory sensitizer.

WASTE DISPOSAL METHOD: ......................................................... Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods. Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: ............................................................. No specific test data available for the mixture. Calculated Estimate: Not classified. Does not meet acute aquatic classification criteria.

CHRONIC AQUATIC TOXICITY: ......................................................... No specific test data available for the mixture. Calculated Estimate: Aquatic Chronic Category 2.

PERSISTANCE AND BIODEGRADABILITY: ...................................... No specific test data available for the mixture.

MOBILITY IN SOIL: ........................................................................ No specific test data available for the mixture.

ADDITIONAL ECOTOXICITY INFORMATION: ................................. In the liquid, uncured state, this product may be harmful to aquatic life long lasting effects. Prevent release to the environment, sewers and natural waters.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS#</th>
<th>Ecotoxicity Classification Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane, 2,2-bis(p-(2,3-epoxypropoxy)phenyl)-polymers</td>
<td>25085-99-8</td>
<td>Aquatic Chronic Cat. 2</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Phenol-formaldehyde polymer glycidyl ether</td>
<td>28064-14-4</td>
<td>Aquatic Chronic Cat. 2</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: ............................................................... Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods. Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

US DOT
SHIPPING NAME: ................................................................. Not applicable.
15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>INVENTORY LIST</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>TSCA</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Europe</td>
<td>EINECS or ELINCS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Canada</td>
<td>CEPA (DSL/NDSL)</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Australia</td>
<td>AICS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Japan</td>
<td>ENCS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>South Korea</td>
<td>KECI</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>China</td>
<td>IECSC</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Philippines</td>
<td>PICCS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
</tbody>
</table>

US EPA SARA TITLE III Reporting and Notification Requirements:
- Subject to Section 302 (TPQ) ........................................... No data available.
- Subject to Section 304 (RQ) ........................................... No data available.
- Subject to Section 311 or 312 ....................................... Immediate.
- Subject to Section 313 ................................................... No data available.

Canada WHMIS Confidential Business Information (CBI): The HMIRA number issued for this CBI claim is #9455. The date of filing is 2015-04-09.

STATE REGULATORY INFORMATION:
Chemicals listed below may be specifically regulated by individual states. For details on state regulatory requirements you should contact the appropriate state agency.

COMPONENT NAME

<table>
<thead>
<tr>
<th>CAS NUMBER</th>
<th>STATE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epichlorohydrin</td>
<td>&lt; 5ppm</td>
</tr>
<tr>
<td>106-69-8</td>
<td>'CA</td>
</tr>
</tbody>
</table>

1. These substances are known to the state of California to cause cancer or reproductive harm, or both.

16. OTHER INFORMATION

REASON FOR ISSUE: SDS prepared according to the requirements of the US OSHA 1910.1200 HazCom 2012 and Canada Hazardous Products Regulation WHMIS 2015.

PREPARED BY: G. M. House
APPROVED BY: G. M. House
SDS CONTACT: safety@gougeon.com
TITLE: Health, Safety & Environmental Manager
APPROVAL DATE: August 15, 2016
SUPERSEDES DATE: June 1, 2015
SDS VERSION: 105-2016a
OTHER HAZARD INFORMATION AND RATING SYSTEMS:

<table>
<thead>
<tr>
<th>HMIS® RATING</th>
<th>NFPA® 704 CODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH: 2</td>
<td></td>
</tr>
<tr>
<td>FLAMMABILITY: 1</td>
<td>1</td>
</tr>
<tr>
<td>PHYSICAL HAZARD: 1</td>
<td></td>
</tr>
<tr>
<td>PERSONAL PROTECTION:</td>
<td>1</td>
</tr>
</tbody>
</table>

Approximate HMIS and NFPA Risk Ratings Legend:
0 = Low or None; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

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Document Group: 24-2437-2
Issue Date: 01/12/18
Version Number: 7.01
Supercedes Date: 09/04/15

Product identifier

ID Number(s):

Recommended use
Automotive, Repairing Auto Body

Supplier's details
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:
24-2429-9, 24-2440-6

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Document Group: 24-2440-6
Issue Date: 05/22/18
Version Number: 12.00
Supersedes Date: 12/22/17

SECTION 1: Identification

1.1. Product identifier

Product Identification Numbers
LB-K100-0411-2, LB-K100-0414-8, LB-K100-0414-9

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Curing Agent

1.3. Supplier’s details
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification
Organic Peroxide: Type D.
Acute Toxicity (oral): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1C.

2.2. Label elements
Signal word
Danger

Symbols
Flame | Corrosion | Exclamation mark |

Pictograms

Hazard Statements
Heating may cause a fire.

Harmful if swallowed.
Causes severe skin burns and eye damage.

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep away from clothing and other combustible materials.
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves, protective clothing, and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES:  Rinse cautiously with water for several minutes.  Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
IF SWALLOWED:  Rinse mouth.  Do NOT induce vomiting.

Storage:
Protect from sunlight.
Store at temperatures not exceeding 25C/77F.  Keep cool.
Store locked up.
Store away from other materials.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
May cause chemical gastrointestinal burns.

1% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Phthalate</td>
<td>131-11-3</td>
<td>30 - 60 Trade Secret *</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Protect from sunlight. Store at temperatures not exceeding 25C/77F. Keep cool. Keep only in original container. Store away from acids. Store away from oxidizing agents. Store away from other materials. Keep/store away from clothing and other combustible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Phthalate</td>
<td>131-11-3</td>
<td>ACGIH</td>
<td>TWA:5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Dimethyl Phthalate</td>
<td>131-11-3</td>
<td>OSHA</td>
<td>TWA:5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>1338-23-4</td>
<td>ACGIH</td>
<td>CEIL:0.2 ppm</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>7722-84-1</td>
<td>ACGIH</td>
<td>TWA:1 ppm</td>
<td>A3: Confirmed animal carcin.</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>7722-84-1</td>
<td>OSHA</td>
<td>TWA:1.4 mg/m3(1 ppm)</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
<td>ACGIH</td>
<td>TWA:200 ppm; STEL:300 ppm</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
<td>OSHA</td>
<td>TWA:590 mg/m3(200 ppm)</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
- Full Face Shield
- Indirect Vented Goggles

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Butyl Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Butyl rubber

Respiratory protection
An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
- Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form: Liquid
Odor, Color, Grade: Slight odor. Clear.
Odor threshold: No Data Available
pH: No Data Available
Melting point: No Data Available
Boiling Point: 244 °F
Flash Point: > 200 °F [Test Method: Closed Cup] [Details: No flash to boiling point.]
Evaporation rate: No Data Available
Flammability (solid, gas): Not Applicable
Flammable Limits(LEL): No Data Available
Flammable Limits(UEL): No Data Available
Vapor Pressure: No Data Available
Vapor Density: > 1
Density: 1.1 g/ml
Specific Gravity: 1.1 [Ref Std.: WATER=1]
Solubility in Water: Negligible
Solubility non-water: No Data Available
Partition coefficient: n-octanol/ water: No Data Available
Autoignition temperature: No Data Available
Decomposition temperature: No Data Available
Viscosity: No Data Available
Hazardous Air Pollutants: 43.1 % weight
Volatile Organic Compounds: 39 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds: 3.5 % weight [Test Method: Tested per ASTM protocol]
Percent volatile: 45.0 % weight
VOC Less H2O & Exempt Solvents: 39 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Light
Sparks and/or flames
Temperatures above the boiling point

10.5. Incompatible materials
Strong oxidizing agents
Alkali and alkaline earth metals
Strong acids

10.6. Hazardous decomposition products
<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects
Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**
May be harmful if inhaled.
- Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin Contact:**
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

**Eye Contact:**
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

**Ingestion:**
Harmful if swallowed. Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

**Additional Health Effects:**

Single exposure may cause target organ effects:
- Dermal Effects: Signs/symptoms may include changes in skin pigmentation and/or coloration.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Dermal</td>
<td>No data available; calculated ATE &gt;5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Overall product</td>
<td>Inhalation-Vapor (4 hr)</td>
<td>No data available; calculated ATE 20 - 50 mg/l</td>
<td></td>
</tr>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>No data available; calculated ATE 300 - 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Dimethyl Phthalate</td>
<td>Ingestion-Dust/Mist (4 hours)</td>
<td>Other</td>
<td>LC50 &gt; 15.1 mg/l</td>
</tr>
<tr>
<td>Dimethyl Phthalate</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 11,940 mg/kg</td>
</tr>
<tr>
<td>Dimethyl Phthalate</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 6,800 mg/kg</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 4,000 mg/kg</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Inhalation-Vapor (4 hours)</td>
<td>Rat</td>
<td>LC50 15.4 mg/l</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 484 mg/kg</td>
</tr>
<tr>
<td>Phlegmatizer</td>
<td>Dermal</td>
<td>Guinea pig</td>
<td>LD50 &gt; 18,800 mg/kg</td>
</tr>
<tr>
<td>Phlegmatizer</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 8 mg/l</td>
</tr>
<tr>
<td>Phlegmatizer</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 3,200 mg/kg</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 8,050 mg/kg</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>Inhalation-Vapor (4 hours)</td>
<td>Rat</td>
<td>LC50 34.5 mg/l</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,737 mg/kg</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
</tbody>
</table>
### Hydrogen Peroxide

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation-Dust/Mist</td>
<td>Rat</td>
<td>LC50 2 mg/l</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 1,193 mg/kg</td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Rabbit</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Rabbit</td>
<td>Corrosive</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Human</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>Rabbit</td>
<td>Severe irritant</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Rabbit</td>
<td>Corrosive</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Human</td>
<td>Not classified</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Guinea pig</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

### Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

### Germ Cell Mutagenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Not Specified</td>
<td>Mouse</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>Inhalation</td>
<td>Human</td>
<td>Not carcinogenic</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Dermal</td>
<td>Multiple animal species</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Ingestion</td>
<td>Mouse</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Dermal</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 70 mg/kg/day</td>
<td>13 weeks</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 75 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
</tbody>
</table>
### Methyl Ethyl Ketone Peroxide

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Rat NOAEL 75 mg/kg/day</td>
<td></td>
<td>28 days</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Dermal</td>
<td>Not classified for male reproduction</td>
<td>Rat NOAEL 70 mg/kg/day</td>
<td></td>
<td>13 weeks</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Rat NOAEL 50 mg/kg/day</td>
<td></td>
<td>premating &amp; during gestation</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Inhalation</td>
<td>Not classified for development</td>
<td>Rat LOAEL 8.8 mg/l</td>
<td></td>
<td>during gestation</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Rat LOAEL 5 mg/kg/day</td>
<td></td>
<td>6 months</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Rat LOAEL 5 mg/kg/day</td>
<td></td>
<td>6 months</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Rat LOAEL 5 mg/kg/day</td>
<td></td>
<td>during gestation</td>
<td></td>
</tr>
</tbody>
</table>

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td></td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td></td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td></td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>liver</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Rat</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>May cause respiratory irritation</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Ingestion</td>
<td>nervous system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
<td>LOAEL Not available</td>
<td></td>
</tr>
</tbody>
</table>

#### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Dermal</td>
<td>heart</td>
<td>hematopoietic system</td>
<td>liver</td>
<td>immune system</td>
<td>nervous system</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Ingestion</td>
<td>liver</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Rat</td>
<td>LOAEL 97 mg/kg/day</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Dermal</td>
<td>nervous system</td>
<td>Not classified</td>
<td>Guinea pig</td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>Inhalation</td>
<td>liver</td>
<td>kidney and/or bladder</td>
<td>heart</td>
<td>endocrine system</td>
<td>gastrointestinal tract</td>
</tr>
</tbody>
</table>
Methyl Ethyl Ketone | Ingestion | liver | Not classified | Rat | NOAEL Not available | 7 days
Methyl Ethyl Ketone | Ingestion | nervous system | Not classified | Rat | NOAEL 173 mg/kg/day | 90 days
Hydrogen Peroxide | Ingestion | hematopoietic system | Not classified | Rat | NOEL 0.005 mg/kg/day | 6 months
Hydrogen Peroxide | Ingestion | liver | kidney and/or bladder | Not classified | Mouse | NOAEL Not available | 35 weeks

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information
Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information
Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:
Physical Hazards
Organic peroxide
Health Hazards

Acute toxicity
Hazard Not Otherwise Classified (HNOC)
Serious eye damage or eye irritation
Skin Corrosion or Irritation

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl Phthalate</td>
<td>131-11-3</td>
<td>Trade Secret 30 - 60</td>
</tr>
</tbody>
</table>

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td>Oxidizer</td>
</tr>
</tbody>
</table>

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>1</td>
<td>X - See PPE section</td>
</tr>
</tbody>
</table>

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

<table>
<thead>
<tr>
<th>Document Group:</th>
<th>Issue Date:</th>
<th>Version Number:</th>
<th>Supersedes Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-2440-6</td>
<td>05/22/18</td>
<td>12.00</td>
<td>12/22/17</td>
</tr>
</tbody>
</table>

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Safety Data Sheet

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Document Group: 24-2429-9
Issue Date: 12/22/17
Version Number: 5.04
Supercedes Date: 08/04/15

SECTION 1: Identification

1.1. Product identifier

Product Identification Numbers
LB-K100-1567-8, LB-K100-1567-9, LB-K100-1568-0, LB-K100-0410-9, LB-K100-0411-0, LB-K100-0411-1, LB-K100-0537-7, LB-K100-0537-8, LB-K100-0537-9, LB-K100-0538-0, LB-K100-0538-1, LB-K100-0538-2, 41-0003-6688-4

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Fiberglass Repair Resin

1.3. Supplier's details
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification
Flammable Liquid: Category 3.
Serious Eye Damage/Irritation: Category 2B.
Carcinogenicity: Category 2.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (single exposure): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Flame | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Flammable liquid and vapor.

Causes eye irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.

Causes damage to organs:
liver  |
sensory organs  |

Causes damage to organs through prolonged or repeated exposure:
sensory organs  |

May cause damage to organs through prolonged or repeated exposure:
liver  |

Precautionary Statements
General:
Keep out of reach of children.

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Call a POISON CENTER or doctor/physician if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**
Store in a well-ventilated place. Keep container tightly closed.  
Keep cool.  
Store locked up.

**Disposal:**
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

### SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester Polymer</td>
<td>Trade Secret*</td>
<td>40 - 70 Trade Secret *</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>100-42-5</td>
<td>15 - 40 Trade Secret *</td>
</tr>
<tr>
<td>Silica</td>
<td>7631-86-9</td>
<td>0.5 - 1.5 Trade Secret *</td>
</tr>
</tbody>
</table>

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

**Inhalation:**
Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If Swallowed:**
Rinse mouth. If you feel unwell, get medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

#### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.
5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.
### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

#### 8.2.2. Personal protective equipment (PPE)

**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

- Indirect Vented Goggles

**Skin/hand protection**

No protective gloves required. Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA) Polymer laminate

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

- Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Physical Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Specific Physical Form:</td>
<td>Paste</td>
</tr>
<tr>
<td>Odor, Color, Grade:</td>
<td>Pungent organic odor, Light straw color</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH:</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>
Melting point: No Data Available
Boiling Point: 180 °F - 415 °F
Flash Point: 88 °F [Test Method: Closed Cup]
Evaporation rate: No Data Available
Flammability (solid, gas): Not Applicable
Flammable Limits (LEL): 1.1 %
Flammable Limits (UEL): No Data Available
Vapor Pressure: 3.45 mmHg
Vapor Pressure: No Data Available
Vapor Density: No Data Available
Density: 1.14 g/ml
Specific Gravity: 1.14 [Ref Std: WATER=1]
Solubility in Water: Negligible
Solubility- non-water: No Data Available
Partition coefficient: n-octanol/ water: No Data Available
Autoignition temperature: No Data Available
Decomposition temperature: No Data Available
Vapor Pressure: No Data Available
Vapor Pressure: No Data Available
Vapor Density: No Data Available
Density: 1.14 g/ml
Specific Gravity: 1.14 [Ref Std: WATER=1]
Solubility in Water: Negligible
Solubility- non-water: No Data Available
Partition coefficient: n-octanol/ water: No Data Available
Autoignition temperature: No Data Available
Decomposition temperature: No Data Available
Vapor Pressure: No Data Available
Vapor Pressure: No Data Available
Vapor Density: No Data Available
Density: 1.14 g/ml
Specific Gravity: 1.14 [Ref Std: WATER=1]
Solubility in Water: Negligible
Solubility- non-water: No Data Available
Partition coefficient: n-octanol/ water: No Data Available
Autoignition temperature: No Data Available
Decomposition temperature: No Data Available
Viscosity: No Data Available
Hazardous Air Pollutants: 33.8 lb HAPS/lb solids [Test Method: Calculated]
Volatile Organic Compounds: 386 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds: 33.8 % weight [Test Method: calculated per CARB title 2]
Percent volatile: 33.8 % weight
VOC Less H2O & Exempt Solvents: 386 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat
Sparks and/or flames

10.5. Incompatible materials
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>Not Specified</td>
</tr>
</tbody>
</table>

SECTION 11: Toxicological information
The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**
May be harmful if inhaled.
- Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

  May cause additional health effects (see below).

**Skin Contact:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**Eye Contact:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

  May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**
- Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.
- Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.
- Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**
- Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.
- Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.
- Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

**Carcinogenicity:**
Contains a chemical or chemicals which can cause cancer.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Class Description</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>100-42-5</td>
<td>Grp. 2B: Possible human carc.</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>100-42-5</td>
<td>Anticipated human carcinogen</td>
<td>National Toxicology Program Carcinogens</td>
</tr>
</tbody>
</table>
Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Dermal</td>
<td></td>
<td>No data available; calculated ATE &gt;5,000 mg/kg</td>
</tr>
<tr>
<td>Overall product</td>
<td>Inhalation-Vapor (4 hr)</td>
<td></td>
<td>No data available; calculated ATE20 - 50 mg/l</td>
</tr>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td></td>
<td>No data available; calculated ATE &gt;5,000 mg/kg</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Dermal</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation-Vapor (4 hours)</td>
<td>Rat</td>
<td>LC50 8.3 mg/l</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 5,000 mg/kg</td>
</tr>
<tr>
<td>Silica</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Silica</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 0.691 mg/l</td>
</tr>
<tr>
<td>Silica</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,110 mg/kg</td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>official classification</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Silica</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>official classification</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>Silica</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>Guinea pig</td>
<td>Not classified</td>
</tr>
<tr>
<td>Silica</td>
<td>Human and animal</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

### Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

### Germ Cell Mutagenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>In vivo</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Silica</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
</tbody>
</table>

### Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>Ingestion</td>
<td>Mouse</td>
<td>Carcinogenic</td>
</tr>
</tbody>
</table>


### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 21 mg/kg/day</td>
<td>3 generation</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 2.1 mg/l</td>
<td>2 generation</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>Not classified for male reproduction</td>
<td>Rat</td>
<td>NOAEL 2.1 mg/l</td>
<td>2 generation</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Rat</td>
<td>NOAEL 400 mg/kg/day</td>
<td>60 days</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Rat</td>
<td>NOAEL 400 mg/kg/day</td>
<td>during gestation</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>Not classified for development</td>
<td>Multiple animal species</td>
<td>NOAEL 2.1 mg/l</td>
<td>during gestation</td>
</tr>
<tr>
<td>Silica</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 509 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>Silica</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Rat</td>
<td>NOAEL 497 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>Silica</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Rat</td>
<td>NOAEL 1,350 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
</tbody>
</table>

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>auditory system</td>
<td>Causes damage to organs</td>
<td>Multiple animal species</td>
<td>LOAEL 4.3 mg/l</td>
<td>not available</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>liver</td>
<td>Causes damage to organs</td>
<td>Mouse</td>
<td>LOAEL 2.1 mg/l</td>
<td>not available</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human and animal</td>
<td>NOAEL Not available</td>
<td>not available</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>endocrine system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL Not available</td>
<td>not available</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Multiple animal species</td>
<td>NOAEL 2.1 mg/l</td>
<td>not available</td>
</tr>
</tbody>
</table>

#### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>eyes</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>auditory system</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
<td>Multiple animal species</td>
<td>NOAEL 1.3 mg/l</td>
<td>not available</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>liver</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
<td>Mouse</td>
<td>LOAEL 0.85 mg/l</td>
<td>13 weeks</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>nervous system</td>
<td>Some positive data exist, but the</td>
<td>Multiple</td>
<td>LOAEL 1.1</td>
<td>not available</td>
</tr>
<tr>
<td>Substance</td>
<td>Route of Exposure</td>
<td>Effect System</td>
<td>Data Availability</td>
<td>Animal Species</td>
<td>NOAEL/LOAEL/NOAEL Not Available</td>
<td>Duration</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>---------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>---------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Styrene Monomer</td>
<td>Inhalation</td>
<td>hematopoietic system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 0.85 mg/l</td>
<td>7 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>endocrine system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 0.6 mg/l</td>
<td>10 days</td>
</tr>
<tr>
<td></td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Not classified</td>
<td>Multiple animal species</td>
<td>LOAEL 0.09 mg/l</td>
<td>not available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>heart</td>
<td>bone, teeth, nails, and/or hair</td>
<td>muscles</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>nervous system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>LOAEL 500 mg/kg/day</td>
<td>8 weeks</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>immune system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Multiple animal species</td>
<td>NOAEL Not available</td>
<td>not available</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>liver</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 677 mg/kg/day</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>hematopoietic system</td>
<td>Not classified</td>
<td>Dog</td>
<td>NOAEL 600 mg/kg/day</td>
<td>470 days</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>heart</td>
<td>respiratory system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 35 mg/kg/day</td>
</tr>
<tr>
<td>Silica</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Not classified</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
</tbody>
</table>

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information**

**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

Dispose of contents/container in accordance with the local/regional/national/international regulations.

Incinerate uncured product in a permitted waste incineration facility. Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**SECTION 14: Transport Information**
For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information**

15.1. US Federal Regulations
Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:**

<table>
<thead>
<tr>
<th>Physical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable (gases, aerosols, liquids, or solids)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Serious eye damage or eye irritation</td>
</tr>
<tr>
<td>Specific target organ toxicity (single or repeated exposure)</td>
</tr>
</tbody>
</table>

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>100-42-5</td>
<td>Trade Secret  15 - 40</td>
</tr>
</tbody>
</table>

15.2. State Regulations
Contact 3M for more information.

**California Proposition 65**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene Monomer</td>
<td>100-42-5</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

**This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.**

**SECTION 16: Other information**

**NFPA Hazard Classification**

Health: 2  Flammability: 3  Instability: 0  Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include...
the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group: 24-2429-9  Version Number: 5.04
Issue Date: 12/22/17  Supercedes Date: 08/04/15

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3M USA SDSs are available at www.3M.com
1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : PARTALL® Coverall Film

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Mold release agent

1.3 Details of the supplier of the safety data sheet

Company : REXCO
P.O. Box 80996
Conyers, Georgia 30013
U.S.A.
Telephone : +1 770 483 7610
Fax : +1 770 483 8550
Email : info@rexco-usa.com

1.4 Emergency telephone number

ChemTrec (24 hours per day)
Telephone (U.S.A. and Canada) : 1 800 434 9300
Telephone (International) : +1 703 527 3887 (Collect calls accepted)

2. Hazards identification

2.1 Classification of the substance or mixture

Not hazardous

2.2 Label Elements

Hazard pictograms : None
Signal word : None

3. Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture

Hazardous components

None
4. First aid measures

4.1 Description of first aid measures
General advice: Do not leave victim unattended. Show this safety data sheet to doctor in attendance.

In case of eye contact: Flush immediately with cold water for 15 minutes. Remove contact lenses. Keep eye wide open while rinsing. Get prompt medical attention.

In case of skin contact: Remove contaminated clothing and wash affected area with soap and warm water. If irritation persists, seek medical attention. Launder contaminated clothing and shoes prior to reuse.

If inhaled: Expose individual to fresh air and/or oxygen if light-headed or having difficulty breathing. If difficulty breathing persists, seek medical attention.

If swallowed: Seek immediate medical attention. Do not induce vomiting. If spontaneous vomiting occurs keep victim’s head below hips to prevent aspiration into lungs. Do not leave individual unattended.

5. Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Standard procedure for chemical fires. Use dry chemicals or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Water may be unsuitable as an extinguishing media but helpful in keeping adjacent areas cool. Avoid spreading burning liquid with water used for cooling purposes.

5.2 Special hazards arising from the substance or mixture
None

5.3 Advice for firefighters
Special protective equipment for firefighters: Wear self-contained breathing apparatus with full face piece and protective clothing. Avoid contact with skin and eyes.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Ensure adequate ventilation. Keep sources of ignition and hot metal surfaces isolated from spill.

6.2 Environmental precautions
Prevent product from entering drains. Stop spill at source and prevent further leakage or spillage if safe to do so. If product contaminates rivers and lakes or drains, notify proper authorities.

6.3 Methods and materials for containment and cleaning up
Flush spilled material into suitable retaining areas or containers. Small amounts of spilled material may be absorbed with any standard absorbent. Confine spill and place into suitable closed container for disposal. Dispose of in accordance with regional, national, and local laws and regulations.
7. Handling and storage

7.1 Precautions for safe handling
Advice on safe handling: For personal protection see Section 8. Smoking, eating, and drinking should be prohibited in the application area. Empty containers may contain product residue such as vapors; continue to observe safe handling precautions.

Advice on protection against fire and explosion: Normal measures for preventive fire protection. Keep work areas free of hot metal surfaces and other sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool dry location at 100 °F (38 °C) or below. Do not allow to freeze. If freezing occurs, allow material to thaw completely and agitate thoroughly prior to use. Keep container tightly closed when not in use. Observe label precautions.

8. Exposure controls/personal protection

8.1 Control parameters
No specific data available for this product.

8.2 Exposure controls
Use with adequate ventilation.

Personal protective equipment
Hand protection: Wear chemical resistant impervious gloves.

Eye protection: Safety glasses with side shields or goggles are recommended. Eye wash stations are recommended for the work area.

Skin and body protection: Wear impervious clothing and shoes. Safety showers are recommended for the work area.

Respiratory protection: Provide sufficient general and/or local exhaust.

Hygiene measures: Do not eat, drink, or smoke while using. Wash hands before breaks and at the end of workday.

Environmental exposure controls
Prevent product from entering drains. Stop spill at source and prevent further leakage or spillage if safe to do so. If product contaminates rivers and lakes or drains, notify proper authorities.
9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: purple or clear liquid
Odour: neutral
Odour threshold: no data available
pH: 4.5 – 6.5
Melting point/freezing point: no data available
Initial boiling point and boiling range: no data available / no data available
Flash point: > 200 °F (> 93 °C)
Evaporation rate: no data available
Flammability: not flammable
Upper/lower flammability or explosive limits: not flammable / not explosive
Vapour pressure: no data available
Vapour density: no data available
Relative density: 1.020 – 1.060 (Water = 1)
Solubility: soluble in water
Partition coefficient: n-octanol/water: no data available
Auto-ignition temperature: no data available
Decomposition temperature: no data available
Viscosity: 60 – 100 cps
Volatile organic content (actual VOC): < 10 g/L

10. Stability and reactivity

10.1 Reactivity
Not reactive under normal conditions of use.

10.2 Chemical stability
Stable under normal conditions of use.

10.3 Possibility of hazardous reactions
No decomposition if stored and applied as directed.

10.4 Conditions to avoid
Avoid freezing. If freezing occurs, allow material to thaw completely and agitate thoroughly before use.
10.5 Incompatible materials
Incompatible with strong oxidizing agents.

10.6 Hazardous decomposition products
Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide.

11. Toxicological information
No data specific to this product is available.

11.1 Information on toxicological effects
Acute toxicity: no data available
Skin corrosion/irritation: expected to be slightly irritating
Serious eye damage/irritation: expected to be irritating
Respiratory or skin sensitization: not a skin sensitizer
Germ cell mutagenicity: not considered a mutagenic hazard
Carcinogenicity: not classified as a carcinogen.
Reproductive toxicity: not expected to impair fertility or fetal development.
STOT-single exposure: no data available
STOT-repeated exposure: no data available
Aspiration hazard: no data available

12. Ecological information
Not expected to cause damage to the environment.

12.1 Toxicity
Not expected to be toxic

12.2 Persistence and degradability
Expected to be inherently biodegradable.

12.3 Bioaccumulative potential
No data available

12.4 Mobility
No data available
12.5 Result of PBT and vPvB assessment
No data available

12.6 Other adverse effects
No other adverse effects expected.

13. Disposal considerations
Dispose of in accordance with regional, national, and local laws and regulations.

13.1 Waste treatment methods
Material disposal: Do not dispose of waste into sewer. Do not contaminate ponds, waterways, or ditches with product or used container. Send to a licensed waste management company.

Container disposal: Empty remaining contents. Dispose of as unused product. Do not reuse empty containers.

14. Transport information
This product is not classified as a dangerous good for transport by road, rail, inland waterways, ocean, or air.

15. Regulatory information

15.1 Safety, health, and environmental regulations/legislation specific to the substance or mixture
None

16. Other information
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not be construed as guaranteeing any specific property of the product. REXCO makes no warranty of any kind, express or implied, including warranties of merchantability or fitness for a particular purpose, concerning the safe use of this material in your process or in combination with other substances. Users should make their own tests and assessments as to the suitability of this product or the information contained herein for their particular purposes and uses.

Prepared by: REXCO Product Stewardship Department
Section 1: Identification

1.1. Product identifier
Product form: Substance
Product Identifier(s): Hydroxyl-Terminated Polybutadiene (HTPB) Resin
CAS No: 69102-90-5

1.2. Recommended use of the chemical and restrictions on use
Use of the substance/mixture: Elastomers

1.3. Details of the supplier of the safety data sheet
2113 W 850 N
Cedar City UT 84721
Tel: 435-865-7120
Fax: 435-865-7120
www.rocketmotorparts.com
For non-emergency product information:
Phone: 435-865-7100 or Email: customerservice@aerotech-rocketry.com

1.4. Emergency telephone number
RCS Rocket Motor Parts, Inc.: 435-865-7100 (Language: English only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification: Not classified

2.2. Label elements
GHS-US labeling
Hazard statements (GHS-US): This material has no classified hazards under 29 CFR 1910.1200.
Precautionary statements (GHS-US): Precautionary statement not required.

2.3. Hazards not otherwise classified
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

2.5. Additional information
Based on conditions common to industrial workplace use of this product: Contact with skin or eyes with hot material may cause serious thermal burns to skin or eyes. Vapors formed when material is processed at high temperatures may be irritating to the eyes and upper respiratory tract.

Section 3: Composition/Information on ingredients

3.1. Substance
Chemical name: 1,3-Butadiene, homopolymer, hydroxy-terminated
CAS No: 69102-90-5

3.2. Mixture
Not applicable

Section 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
SAFETY DATA SHEET
Hydroxyl-Terminated Polybutadiene (HTPB) Resin

First-aid measures after skin contact: Wash with plenty of soap and water. If irritation persists, consult a doctor. Heated Material: For serious burns from heated material, get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking, tears or redness persist.

First-aid measures after ingestion: Rinse mouth out with water. If necessary seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the chemical
Fire hazard: Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, can burn in open air or explode if confined.
Explosion hazard: May form flammable/explosive vapor-air mixture.
Hazardous decomposition products in case of fire: Carbon oxides (CO, CO2). Toxic fumes. 1,3-butadiene. Hydrocarbons.

5.3. Advice for firefighters
Firefighting instructions: Fight fire from safe distance and protected location. Avoid direct personal contact with liquid even after fire is out to prevent potentially serious burns. Use water spray or fog for cooling exposed containers. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Prevent fire-fighting water from entering environment.
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Complete protective clothing. Self-contained breathing apparatus.
Other information: Fires are typically very smoky.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Emergency procedures for non-emergency personnel: Ensure adequate ventilation. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures for emergency responders: No additional requirement.

6.2. Methods and material for containment and cleaning up
For containment: Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Keep recovered product for subsequent disposal.
Methods for cleaning up: Wash away residue with large amounts of water. Gather the product and place it in a spare container that has been suitably labeled.

6.3. Reference to other sections
See section 8. Exposure controls/personal protection.

Section 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with elevated temperature or molten product to prevent burns. Use only non-sparking tools. Steam drum heaters are recommended. If heating is necessary for drummed product, loosen or remove bung or lid before warming/ heating product to avoid overpressurization in the drum. Eliminate all ignition sources if safe to do so.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Electrical equipment should conform to the National Electric Code. Containers which are opened should be properly resealed and kept upright to prevent leakage.
Storage conditions: Keep container tightly closed. Store in a dry, cool area. Purge open drums with nitrogen before resealing.

Date of issue: 01/19/2017
Section 8: Exposure controls/personal protection

8.1. Occupational Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV, or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

No additional information available

8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Hand protection: Protective gloves. Do not use natural rubber gloves. Product used with solvents: wear thick (>0.5 mm) nitrile gloves. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility, etc.) is noticed.

Eye protection: Safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Appearance: Viscous.
Color: Colorless to light yellow.
Odor: No data available
Odor threshold: No data available
pH: Not applicable
Relative evaporation rate (butyl acetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: >300 °C
Flash point: >205 °C Cleveland open cup (COC)
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: 0.9
Solubility: Water: practically insoluble
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: ~5000 mPa.s
Explosion limits: No data available

9.2. Other information

No additional information available

Section 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

Cracks into gaseous and liquid products above 426 °C. Decomposes by polymerization above 204 °C. Once initiated, the reaction generates enough heat to continue spontaneously.

10.4. Conditions to avoid

SAFETY DATA SHEET
Hydroxyl-Terminated Polybutadiene (HTPB) Resin

10.5. Incompatible materials

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11: Toxicological information

11.1. Information on toxicological effects
Likely routes of exposure : Ingestion. Skin and eye contact.
Acute toxicity : Not classified
Based on available data, the classification criteria are not met

| POLY BD® R-45HTLO (69102-90-5) |
|-------------------------------|------------------|
| LD50 oral rat                  | > 34600 mg/kg    |

Skin corrosion/irritation : Not classified
Based on available data, the classification criteria are not met
Practically non-irritating (rabbit)

Serious eye damage/irritation : Not classified
Based on available data, the classification criteria are not met
Slight eye irritant (rabbit)

Respiratory or skin sensitization : Not classified
Based on available data, the classification criteria are not met
Does not cause cutaneous sensitization for guinea-pigs

Germ cell mutagenicity : Not classified
Lack of data

Carcinogenicity : Not classified
Lack of data

Reproductive toxicity : Not classified
Lack of data

Specific target organ toxicity (single exposure) : Not classified
Lack of data

Specific target organ toxicity (repeated exposure) : Not classified
Lack of data

Aspiration hazard : Not classified
Lack of data

Section 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available
SAFETY DATA SHEET
Hydroxyl-Terminated Polybutadiene (HTPB) Resin

Section 13: Disposal considerations
13.1. Waste treatment methods
Waste treatment methods: Transfer to a safe disposal area in accordance with federal, state, and local regulations.

Section 14: Transport information
US Transport (DOT) for Bulk Shipments (Non-Bulk Shipments May Differ)
Not regulated by US DOT

Transport by sea (IMDG)
Not regulated by IMDG

Air transport (IATA)
Not regulated by IATA

Section 15: Regulatory information
15.1. US Federal regulations

EPA TSCA Status
All components of this product are listed or excluded from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

SARA Section 313 Supplier Notification
This product contains no toxic chemicals in excess of the applicable de minimis concentration that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA Section 311/312 Hazard Classes Not applicable

Export Control Statement: This product and technical data related to this product are export controlled by the United States (US) Government. Exportation/international shipments of this product are subject to licensing by the US Government. Export, reexport or other diversion, either in the original form or after being incorporated in an intermediate process into other end-items, is STRICTLY PROHIBITED unless expressly authorized by the cognizant agency of the US Government. If you plan to export this material in some form, please contact RCS Rocket Motor Components, Inc. for more information.

Export Control Classification Number (ECCN): 1C111

15.2. International regulations
CANADA
No additional information available

National inventories
1,3-Butadiene, homopolymer, hydroxy-terminated (69102-90-5)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the China Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS)

15.3. US State regulations
California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity, not limited to any that may be listed below.

Section 16: Other information
NFPA (National Fire Protection Association)
SAFETY DATA SHEET
Hydroxyl-Terminated Polybutadiene (HTPB) Resin

<table>
<thead>
<tr>
<th>NFPA health hazard</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA fire hazard</td>
<td>1</td>
</tr>
<tr>
<td>NFPA reactivity</td>
<td>1</td>
</tr>
</tbody>
</table>

HMIS III Rating

| Health   | 1 |
| Flammability | 1 |
| Physical Hazard | 1 |
| Personal Protection | See section 8 of SDS |

US OSHA LABEL as specified under 29 CFR §1910.1200 (f)

Hydroxyl-Terminated Polybutadiene (HTPB) Resin

This material has no classified hazards under 29 CFR 1910.1200.

Precautionary statement not required.

Version   : 1
Date of issue   : January 19, 2017

MSDS ID: Hydroxyl-Terminated Polybutadiene (HTPB) Resin

The information contained in this Safety Data Sheet (SDS) is believed by RCS Rocket Motor Components, Inc. (RCS RMC) to be accurate on the date issued. However, materials may present unknown hazards and should be used with caution. Final determination of suitability and use of any material is the sole responsibility of the user. Neither RCS RMC nor any of its subsidiaries or affiliated companies assumes any liability whatsoever for the accuracy or completeness of the information contained herein or reliance thereon. If the material is repackaged, the user is responsible and must ensure that proper health, safety and other necessary information is included with the material and/or on the container. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING THE MATERIALS OR THE INFORMATION CONTAINED IN THIS SDS. ALTERATION OF THIS DOCUMENT IS STRICTLY PROHIBITED.
### SAFETY DATA SHEET

**Autcrete® ceramic cement**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Autcrete® ceramic cement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>15030, 15032</td>
</tr>
</tbody>
</table>

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

| Description       | Foundry material.        |

**1.3. Details of the distributor of the safety data sheet**

<table>
<thead>
<tr>
<th>Company</th>
<th>Flexbar Machine Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>250 Gibbs Road, Islandia, NY 11751 USA</td>
</tr>
<tr>
<td>Web</td>
<td><a href="http://www.flexbar.com">www.flexbar.com</a></td>
</tr>
<tr>
<td>Telephone</td>
<td>+1 (631) 582-8440</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 (631) 582-8487</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:sales@flexbar.com">sales@flexbar.com</a></td>
</tr>
</tbody>
</table>

**1.4. Emergency telephone number**

<table>
<thead>
<tr>
<th>Emergency telephone number</th>
<th>USA +1 419 865 9497</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Ransom &amp; Randolph Co.</td>
</tr>
<tr>
<td>Time</td>
<td>07:30 to 16:30 (Eastern Std. / GMT minus 5)</td>
</tr>
</tbody>
</table>

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

<table>
<thead>
<tr>
<th>Classification - 1999/45/EC</th>
<th>Xn; R42/43 Xi; R36/38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main hazards</td>
<td>Irritating to eyes and skin. May cause sensitisation by inhalation and skin contact.</td>
</tr>
</tbody>
</table>

| Classification - EC 1272/2008 | Carc. 1A: H350; Repr. 1B: H360FD; STOT RE 1: H372; |

**2.2. Label elements**

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>![Hazard Pictogram]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signal Word</th>
<th>Danger</th>
</tr>
</thead>
</table>

| Hazard Statement | Carc. 1A: H350 - May cause cancer inhalation. Repr. 1B: H360FD - May damage fertility. May damage the unborn child. STOT RE 1: H372 - Causes damage to organs (lungs) through prolonged or repeated exposure inhalation. |
2.2. Label elements

Precautionary Statement: Prevention

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 - Wash (hands) thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P285 - In case of inadequate ventilation wear respiratory protection.

Precautionary Statement: Response

- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P314 - Get medical advice/attention if you feel unwell.

Precautionary Statement: Storage

- P405 - Store locked up.

Precautionary Statement: Disposal

- P501 - Dispose of contents/container to local and national regulations.

2.3. Other hazards

Other hazards

Product contains crystalline silica.
Zircon contains trace amounts of naturally occurring uranium, thorium, and radium.

Further information

Not applicable. PBT and vPvB assessment.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

67/548/EEC / 1999/45/EC

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Index No.</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration Number</th>
<th>Conc. (%w/w)</th>
<th>Classification</th>
<th>M-factor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>zirconium silicate</td>
<td>14940-68-2</td>
<td></td>
<td></td>
<td></td>
<td>40 - 70%</td>
<td>Xn; R42/43 Xi; R36</td>
<td></td>
</tr>
<tr>
<td>phosphate binder (proprietary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 - 10%</td>
<td>Xi; R36/38</td>
<td></td>
</tr>
<tr>
<td>phosphate binder 2 (proprietary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 - 5%</td>
<td>Xi; R36/38</td>
<td></td>
</tr>
<tr>
<td>Magnesium Oxide</td>
<td>01309-48-4</td>
<td>215-171-9</td>
<td></td>
<td></td>
<td>10 - 20%</td>
<td>Xn; R20 Xi; R37/38</td>
<td></td>
</tr>
<tr>
<td>boric acid</td>
<td>005-007-00-2</td>
<td>10043-35-3</td>
<td>233-139-2</td>
<td></td>
<td>0 - 5%</td>
<td>Repr. Cat. 2; R60-61</td>
<td></td>
</tr>
</tbody>
</table>

EC 1272/2008

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Index No.</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration Number</th>
<th>Conc. (%w/w)</th>
<th>Classification</th>
<th>M-factor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>zirconium silicate</td>
<td>14940-68-2</td>
<td></td>
<td></td>
<td></td>
<td>40 - 70%</td>
<td>Xn; R42/43 Xi; R36</td>
<td></td>
</tr>
<tr>
<td>phosphate binder (proprietary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 - 10%</td>
<td>Skin Irrit. 2; H315; Eye Irrit. 2; H319;</td>
<td></td>
</tr>
<tr>
<td>phosphate binder 2 (proprietary)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 - 5%</td>
<td>Skin Irrit. 2; H315; Eye Irrit. 2; H319;</td>
<td></td>
</tr>
<tr>
<td>quartz (conc. &gt;/= 1.0%)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td></td>
<td></td>
<td>0 - 5%</td>
<td>Carc. 1A; H350; STOT RE 1; H372;</td>
<td></td>
</tr>
<tr>
<td>Magnesium Oxide</td>
<td>01309-48-4</td>
<td>215-171-9</td>
<td></td>
<td></td>
<td>10 - 20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>boric acid</td>
<td>005-007-00-2</td>
<td>10043-35-3</td>
<td>233-139-2</td>
<td></td>
<td>0 - 5%</td>
<td>Repr. 1B; H360FD;</td>
<td></td>
</tr>
</tbody>
</table>

Further information

Full text for all Risk Phrases mentioned in this section are displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Move the exposed person to fresh air.

Eye contact

Rinse immediately with plenty of water for 15 minutes holding the eyelids open.
4.1. Description of first aid measures

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>Ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash with soap and water.</td>
<td>Drink 1 to 2 glasses of water. DO NOT INDUCE VOMITING.</td>
</tr>
</tbody>
</table>

4.2. Most important symptoms and effects, both acute and delayed

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Eye contact</th>
<th>Skin contact</th>
<th>Ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>May cause irritation to respiratory system.</td>
<td>May cause irritation to eyes.</td>
<td>May cause irritation to skin.</td>
<td>May cause irritation to mucous membranes.</td>
</tr>
</tbody>
</table>

4.3. Indication of any immediate medical attention and special treatment needed

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Eye contact</th>
<th>Skin contact</th>
<th>Ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seek medical attention if irritation or symptoms persist.</td>
<td>Seek medical attention if irritation or symptoms persist.</td>
<td>Seek medical attention if irritation or symptoms persist.</td>
<td>Seek medical attention if irritation or symptoms persist.</td>
</tr>
</tbody>
</table>

SECTION 5: Firefighting measures

5.1. Extinguishing media

Use extinguishing media appropriate to the surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters

Self-contained breathing apparatus. Wear suitable protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid formation of dust. Wear suitable respiratory equipment when necessary.

6.2. Environmental precautions

No environmental requirements.

6.3. Methods and material for containment and cleaning up

Avoid raising dust. Clean the area using a vacuum cleaner. Transfer to suitable, labelled container.

6.4. Reference to other sections


SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation of the working area. Avoid formation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke in areas where this product is used or stored. Wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed.

7.3. Specific end use(s)

Foundry material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ensure adequate ventilation of the working area.
8.1. Control parameters

<table>
<thead>
<tr>
<th>Exposure limits - Zirconium silicate</th>
<th>10 mg/m³ STEL ACGIH (respirable fraction)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mg/m³ TWA OSHA PEL (respirable fraction).</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure adequate ventilation of the working area.

8.2.2. Individual protection measures

- Wear protective clothing.
- In case of splashing, wear: Approved safety goggles, safety glasses with side-shields.
- Wear suitable gloves.
- Suitable respiratory equipment.

8.2.3. Environmental exposure controls

Not normally required.

Occupational exposure controls

Appropriate local exhaust ventilation is required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Off white</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight</td>
</tr>
<tr>
<td>pH</td>
<td>4 - 7</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>4.4 (H₂O = 1 @ 20 °C)</td>
</tr>
<tr>
<td>Fat Solubility</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Slightly soluble in water</td>
</tr>
</tbody>
</table>

9.2. Other information
9.2. Other information

| Conductivity | Not applicable. |
| Surface tension | Not applicable. |
| Gas group | Not applicable. |
| Benzene Content | Not applicable. |
| Lead content | No data available |
| VOC (Volatile organic compounds) | Not applicable. |

SECTION 10: Stability and reactivity

10.1. Reactivity
Not applicable.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No Significant Hazard.

10.4. Conditions to avoid
No Significant Hazard.

10.5. Incompatible materials
No Significant Hazard.

10.6. Hazardous decomposition products
- Hazardous Decomposition Products (silica): Crystalline silica will dissolve in hydrofluoric acid and produce silicone tetrafluoride. Reaction with water or acids generates heat.
- Hazardous Decomposition Products (Zircon): Zirconium silicate will disassociate to Zirconium Dioxide (ZRO2) and Silicon dioxide (SiO2) when heated above 1540 degrees Celsius. Hazardous Polymerization: Will not occur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| Acute toxicity | Harmful by inhalation. |
| Skin corrosion/irritation | May cause irritation to skin. |
| Serious eye damage/irritation | Causes serious eye irritation. |
| Respiratory or skin sensitisation | No sensitization effects reported. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Known Human Carcinogens (Category 1). |
| Reproductive toxicity | Possible risk of harm to the unborn child. Possible risk of impaired fertility. |
| STOT-single exposure | Based on available data, the classification criteria are not met. |
| STOT-repeated exposure | Chronic effects |

Prolonged inhalation of respirable crystalline silica

In 1997, the International Agency for Research on Cancer (IARC) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France). In June 2003, the European Commission's Scientific Committee for Occupational Exposure Limits (SCOEL) concluded:

"that the main effect in humans of the inhalation of respirable crystalline silica is silicosis. There is sufficient information to conclude that the relative lung cancer risk is increased in persons with silicosis (and apparently, not in employees without silicosis exposed to silica dust in quarries and..."
11.1. Information on toxicological effects

in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk. Since a clear threshold for silicosis development cannot be identified, any reduction of exposure will reduce the risk of silicosis."

(SCOEL SUM Doc 94-final on respirable crystalline silica, June 2003)
There is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see Section 16).

This product contains trace quantities of naturally occurring radioactive uranium, thorium and radium (106-120 Picocuries/gram). Overexposure to respirable dust containing radioactive materials may cause lung cancer. Zirconium silicate is exempt from NRC regulations for source material per 10 CFR 40, since it falls under the definition of material containing less than 0.05% uranium or thorium. However, calculations show that observance of 2-2.8 mg/m³ of respirable dust will, under voluntary guidelines, ensure that intake is less than 10% of the annual limits on intake (ALS) specified in 10 CFR 20.1502(B) and NRC Standards for the protection against radiation for uranium, thorium, radium and radioactive daughter decay products.).

Based on available data, the classification criteria are not met.

Inhalation of dust may cause shortness of breath.

SECTION 12: Ecological information

12.1. Toxicity

Caulkcrete (R) 100 ceramic cement [NA]
Fish LC50/96h: 200.000 mg/l  Sheephed minnows LC50/96h: 115 mg/l
Fish LC50/48h: > 10,000  Green algae EC50/96h: 2.6 mg/l

12.2. Persistence and degradability
Not applicable.

12.3. Bioaccumulative potential
Does not bioaccumulate.

Partition coefficient

Autocrete® ceramic cement  Not applicable.

12.4. Mobility in soil
Not determined.

12.5. Results of PBT and vPvB assessment
Not determined.

12.6. Other adverse effects
Not applicable.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Dispose of in compliance with all local and national regulations.

Disposal methods
Contact a licensed waste disposal company.

Disposal of packaging
### Disposal of packaging

Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

**Further information**

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

### SECTION 14: Transport information

14.1. UN number

The product is not classified as dangerous for carriage.

14.2. UN proper shipping name

The product is not classified as dangerous for carriage.

14.3. Transport hazard class(es)

The product is not classified as dangerous for carriage.

14.4. Packing group

The product is not classified as dangerous for carriage.

14.5. Environmental hazards

The product is not classified as dangerous for carriage.

14.6. Special precautions for user

The product is not classified as dangerous for carriage.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

The product is not classified as dangerous for carriage.

**Further information**

The product is not classified as dangerous for carriage.

### SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**Regulations**

**U.S. FEDERAL REGULATIONS:**

CERCLA 103 Reportable Quantity: Autocrete not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Chronic health

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

**U.S. STATE REGULATIONS**

California Proposition 65: This product contains the following substances known to the State of California to cause cancer: Crystalline Silica as Quartz (< 5%)

**INTERNATIONAL REGULATIONS:**

Canadian WHMIS Classification: Class D Division 2A.

### 15.2. Chemical safety assessment
### 15.2. Chemical safety assessment

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No data is available on this product.</td>
</tr>
</tbody>
</table>

### SECTION 16: Other information

#### Other information

<table>
<thead>
<tr>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.</td>
</tr>
</tbody>
</table>

#### Social Dialogue on Respirable Crystalline Silica

A multi-sectoral social dialogue agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it was signed on 25 April 2006. This autonomous agreement, which receives the European Commission’s financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from http://www.nepsi.eu and provide useful information and guidance for the handling of products containing respirable crystalline silica. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers.

#### Revision

This document differs from the previous version in the following areas:

2 - Precautionary Statement: Prevention.

#### Text of risk phrases in Section 3

| R20 | Harmful by inhalation. |
| R36/38 | Irritating to eyes and skin. |
| R36 | Irritating to eyes. |
| R37/38 | Irritating to respiratory system and skin. |
| R42/43 | May cause sensitisation by inhalation and skin contact. |
| R60 | May impair fertility. |
| R61 | May cause harm to the unborn child. |

#### Text of Hazard Statements in Section 3

| Skin Irrit. 2: H315 | Causes skin irritation. |
| Eye Irrit. 2: H319 | Causes serious eye irritation. |
| Carc. 1A: H350 | May cause cancer. |
| STOT RE 1: H372 | Causes damage to organs through prolonged or repeated exposure. |
| Repr. 1B: H360FD | May damage fertility. May damage the unborn child. |

#### General information

| STOT RE 1: H372 | Causes damage to organs (lungs) through prolonged or repeated exposure inhalation. |

#### Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.
1. Identification

Product Name: TSTRS 6PK 1.75OZ THINNER 1 3/4OZ
Revision Date: 5/15/2017

Product Identifier: 1156XT
Supercedes Date: 4/19/2016

Product Use/Class: Paint Thinner/Mineral Spirits

Supplier: Rust-Oleum Corporation
615 Buckbee ST
Rockford, IL 61104
USA

Manufacturer: Rust-Oleum Corporation
615 Buckbee ST
Rockford, IL 61104
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification
Symbol(s) of Product

GHS HAZARD STATEMENTS

Flammable Liquid, category 3 H226 Flammable liquid and vapour.
Carcinogenicity, category 2 H351 Suspected of causing cancer.
STOT, repeated exposure, category 2 H373 May cause damage to organs through prolonged or repeated exposure.
Acute Toxicity, Inhalation, category 4 H332 Harmful if inhaled.

GHS LABEL PRECAUTIONARY STATEMENTS

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378 In case of fire: Use alcohol film forming foam, carbon dioxide, dry chemical, dry sand to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local, regional and national regulations.
P201 Obtain special instructions before use.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

GHS SDS PRECAUTIONARY STATEMENTS

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Wt. % Range</th>
<th>GHS Symbols</th>
<th>GHS Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrotreated Light Distillate</td>
<td>64742-47-8</td>
<td>75-100</td>
<td>GHS08</td>
<td>H304</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
<td>2.5-10</td>
<td>GHS02-GHS07</td>
<td>H226-315-319-332</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>1.0-2.5</td>
<td>GHS02-GHS07-GHS08</td>
<td>H225-304-332-351-373</td>
</tr>
</tbody>
</table>

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: No unusual fire or explosion hazards noted. Closed containers may explode when exposed to extreme heat due to buildup of steam. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.
STORAGE: Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat. Do not store above 120 °F. Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight % Less Than</th>
<th>ACGIH TLV-TWA</th>
<th>ACGIH TLV- STEL</th>
<th>OSHA PEL-TWA</th>
<th>OSHA PEL-CeILING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrotreated Light Distillate</td>
<td>64742-47-8</td>
<td>95.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p-isomers)</td>
<td>106-42-3</td>
<td>10.0</td>
<td>100 ppm</td>
<td>150 ppm</td>
<td>100 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>5.0</td>
<td>20 ppm</td>
<td>N.E.</td>
<td>100 ppm</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance: Liquid
Odor: Solvent Like
Relative Density: 0.779
Freeze Point, °C: N.D.
Solubility in Water: Negligible
Decomposition Temp., °C: N.D.
Boiling Range, °C: 135 - 204
Flammability: Supports Combustion
Evaporation Rate: Slower than Ether
Vapor Density: Heavier than Air

Physical State: Liquid
Odor Threshold: N.E.
pH: N.A.
Viscosity: N.D.
Partition Coefficient, n-octanol/water: N.D.
Explosive Limits, vol%: 1.0 - 6.8
Flash Point, °C: 35
Auto-ignition Temp., °C: N.D.
Vapor Pressure: N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid contact with strong acid and strong bases.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation
EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Causes skin irritation. Allergic reactions are possible.
EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Vapor LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-47-8</td>
<td>Hydrotreated Light Distillate</td>
<td>&gt;5000 mg/kg Rat</td>
<td>&gt;2000 mg/kg Rabbit</td>
<td>&gt;5000 mg/L Rat</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>3500 mg/kg Rat</td>
<td>&gt;4350 mg/kg Rabbit</td>
<td>29.08 mg/L Rat</td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene</td>
<td>3500 mg/kg Rat</td>
<td>15400 mg/kg Rabbit</td>
<td>17.4 mg/L Rat</td>
</tr>
</tbody>
</table>

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

<table>
<thead>
<tr>
<th>UN Number:</th>
<th>Domestic (USDOT)</th>
<th>International (IMDG)</th>
<th>Air (IATA)</th>
<th>TDG (Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N.A.</td>
<td>1263</td>
<td>1263</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Proper Shipping Name: Paint Products in Limited Quantities Paint Paint Products in Limited Quantities

| Hazard Class: | N.A. | 3  | 3  | N.A. |
| Packing Group:| N.A. | III| III| N.A. |
| Limited Quantity:| Yes  | Yes| Yes| Yes |

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
16. Other Information

**HMIS RATINGS**
- Health: 2*
- Flammability: 3
- Physical Hazard: 0
- Personal Protection: X

**NFPA RATINGS**
- Health: 2
- Flammability: 3
- Instability: 0

**VOLATILE ORGANIC COMPOUNDS, g/L:** 777

**SDS REVISION DATE:** 5/15/2017

**REASON FOR REVISION:**
- Product Composition Changed
- Substance and/or Product Properties Changed in Section(s):
  - 02 - Hazard Identification
  - 09 - Physical & Chemical Properties
- Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>MEKP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product number</td>
<td>MEKP</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

<table>
<thead>
<tr>
<th>Identified uses</th>
<th>Activator.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses advised against</td>
<td>No specific uses advised against are identified.</td>
</tr>
</tbody>
</table>

1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Easy Composites Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit 39, Park Hall Business Village Longton, Stoke-on-Trent ST3 5XA United Kingdom</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:sales@easycomposites.co.uk">sales@easycomposites.co.uk</a></td>
</tr>
</tbody>
</table>

1.4. Emergency telephone number

| Emergency telephone | +44 (0)1782 454499 |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318</td>
</tr>
</tbody>
</table>

Environmental hazards

Not Classified

Classification (67/548/EEC or 1999/45/EC)

O; R7. Xn; R22. C; R34

2.2. Label elements

<table>
<thead>
<tr>
<th>Pictogram</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>Danger</td>
</tr>
<tr>
<td>Hazard statements</td>
<td></td>
</tr>
</tbody>
</table>
Easy Composites SDS - MEKP

H242 Heating may cause a fire.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from acids, alkalis, heavy metal compounds, oxidising material, combustible materials.
P234 Keep only in original container.
P260 Do not breathe vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a Poison Center/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 Dispose of contents/container in accordance with national regulations.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Specific treatment (see medical advice on this label).
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P410 Protect from sunlight.
P411+235 Store at temperatures not exceeding 30°C. Keep cool.
P501 Store in a dry place.

Contains

methyl ethyl ketone peroxide

Supplementary precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P210 Keep away from acids, alkalis, heavy metal compounds, oxidising material, combustible materials.
P234 Keep only in original container.
P260 Do not breathe vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a Poison Center/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P410 Protect from sunlight.
P411+235 Store at temperatures not exceeding 30°C. Keep cool.
P501 Store in a dry place.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/Information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>dimethyl phthalate</th>
<th>50 - 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number:</td>
<td>131-11-3</td>
</tr>
<tr>
<td>EC number:</td>
<td>205-011-6</td>
</tr>
<tr>
<td>Classification</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Classification (67/548/EEC or 1999/45/EC)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>methyl ethyl ketone peroxide</th>
<th>25 - &lt;50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number:</td>
<td>1338-23-4</td>
</tr>
<tr>
<td>EC number:</td>
<td>215-661-2</td>
</tr>
<tr>
<td>Classification Org. Perox. D - H242</td>
<td></td>
</tr>
<tr>
<td>Classification Acute Tox. 4 - H302</td>
<td></td>
</tr>
<tr>
<td>Classification Skin Corr. 1B - H314</td>
<td></td>
</tr>
<tr>
<td>Classification Eye Dam. 1 - H318</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification (67/548/EEC or 1999/45/EC)</th>
<th>O; R7. Xn; R22. C; R34</th>
</tr>
</thead>
</table>
butanone

**CAS number:** 78-93-3  **EC number:** 201-159-0

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification (67/548/EEC or 1999/45/EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2 - H225</td>
<td>F; R11. Xi; R36. R67</td>
</tr>
<tr>
<td>Eye Irrit. 2 - H319</td>
<td></td>
</tr>
<tr>
<td>STOT SE 3 - H336</td>
<td></td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**
Remove affected person from source of contamination. Promptly remove any clothing that becomes contaminated.

**Inhalation**
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if symptoms are severe or persist.

**Ingestion**
Do not induce vomiting. Get medical attention.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention. Wash contaminated clothing before reuse.

**Eye contact**
Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

**General information**
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
Vapours may cause drowsiness and dizziness. May cause respiratory system irritation.

**Ingestion**
Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.

**Skin contact**
Severe skin irritation. Blistering may occur.

**Eye contact**
May cause blurred vision and serious eye damage. Symptoms following overexposure may include the following: Blindness.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Notes for the doctor**
Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**
Water spray, fog or mist. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire. Dry chemical fire extinguishing agent may catalyse the decomposition.

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards**
The heat of decomposition of the peroxides adds to the heat of the fire. Dry chemical fire extinguishing agent may catalyse the decomposition.
The heat of decomposition of the peroxides adds to the Dry chemical fire extinguishing agent may catalyse the decomposition.

Hazardous combustion products

5.3. Advice for firefighters

Protective actions during firefighting
Avoid breathing fire gases or vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. If dry chemical is used to extinguish a methyl ethyl ketone peroxide fire, the extinguished area must be thoroughly wetted down with water to prevent re-ignition.

Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions
Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Eliminate all sources of ignition. Do not touch or walk into spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with national regulations.

6.4. Reference to other sections

Reference to other sections
For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions
Read and follow manufacturer's recommendations. Avoid inhalation of vapours and contact with skin and eyes. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene
Do not smoke in work area. Eye wash facilities and emergency shower must be available when handling this product. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions
Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs. Keep at temperature not exceeding 25°C. Keep away from oxidising materials, heat and flames.

7.3. Specific end use(s)

Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Easy Composites SDS - MEKP

**Occupational exposure limits**

**dimethyl phthalate**
Long-term exposure limit (8-hour TWA): WEL 5 mg/m³
Short-term exposure limit (15-minute): WEL 10 mg/m³

**methyl ethyl ketone peroxide**
Short-term exposure limit (15-minute): WEL 0.2 ppm 1.5 mg/m³

**butanone**
Long-term exposure limit (8-hour TWA): WEL 200 ppm  600 mg/m³
Short-term exposure limit (15-minute): WEL 300 ppm  899 mg/m³

Sk
WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

---

**dimethyl phthalate (CAS: 131-11-3)**

| DNEL | Workers - Dermal; Long term systemic effects: 100 mg/kg/day  
Workers - Inhalation; Long term systemic effects: 293.86 mg/m³  
Consumer - Dermal; Long term systemic effects: 60 mg/kg/day  
Consumer - Inhalation; Long term systemic effects: 86.96 mg/m³  
Consumer - Oral; Long term systemic effects: 25 mg/kg/day |
|---|---|
| PNEC | Fresh water; 0.192 mg/l  
Marine water; 0.0192 mg/l  
Intermittent release; 0.39 mg/l  
STP; 4 mg/l  
Sediment (Freshwater); 1.403 mg/kg  
Soil; 3.16 mg/kg |

**methyl ethyl ketone peroxide (CAS: 1338-23-4)**

| DNEL | Workers - Dermal; Long term systemic effects: 1.08 mg/kg/day  
Workers - Inhalation; Long term systemic effects: 1.9 mg/m³  
Consumer - Dermal; Long term systemic effects: 0.54 mg/kg/day  
Consumer - Inhalation; Long term systemic effects: 0.41 mg/m³  
Consumer - Oral; Long term systemic effects: 0.27 mg/kg/day |
|---|---|
| PNEC | Fresh water; 5.6 µg/l  
Marine water; 0.56 µg/l  
Intermittent release; 56 µg/l  
STP; 1.2 mg/l  
Sediment (Freshwater); 19 µg/kg  
Sediment (Marinewater); 1.9 µg/kg  
Soil; 2.31 µg/kg |

**butanone (CAS: 78-93-3)**

| DNEL | Workers - Dermal; Long term systemic effects: 1161 mg/kg/day  
Workers - Inhalation; Long term systemic effects: 600 mg/m³  
Consumer - Dermal; Long term systemic effects: 412 mg/kg/day  
Consumer - Inhalation; Long term systemic effects: 106 mg/m³  
Consumer - Oral; Long term systemic effects: 31 mg/kg/day |
|---|---|
| PNEC | Fresh water; 55.8 mg/l  
Marine water; 55.8 mg/l  
Intermittent release; 55.8 mg/l  
STP; 709 mg/l  
Sediment (Freshwater); 284.7 mg/kg  
Sediment (Marinewater); 284.7 mg/kg  
Soil; 22.5 mg/kg |

---

8.2. Exposure controls
Protective equipment

**Appropriate engineering controls**
Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients. Use explosion-proof general and local exhaust ventilation.

**Eye/face protection**
Wear tight-fitting, chemical splash goggles or face shield.

**Hand protection**
Wear protective gloves made of the following material: Neoprene. Nitrile rubber. Butyl rubber. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected.

**Other skin and body protection**
Wear suitable coveralls to prevent exposure to the skin.

**Hygiene measures**
Do not smoke in work area. Provide eyewash station and safety shower. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

**Respiratory protection**
If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapour filter.

**Environmental exposure controls**
Keep container tightly sealed when not in use.

---

**SECTION 9: Physical and Chemical Properties**

**9.1. Information on basic physical and chemical properties**

**Appearance**
Liquid.

**Colour**
Colourless.

**Odour**
Characteristic.

**Odour threshold**
Not available.

**pH**
Not available.

**Melting point**
Not available.

**Initial boiling point and range**
Not available.

**Flash point**
93°C CC (Closed cup).

**Evaporation rate**
Not available.

**Evaporation factor**
Not available.

**Upper/lower flammability or explosive limits**
Not available.

**Vapour pressure**
Easy Composites SDS - MEKP

Not available.

Vapour density
> 1

Relative density
1.18 @ 20°C

Bulk density
Not available.

Solubility(ies)
Slightly soluble in water.

Partition coefficient
Not available.

Auto-ignition temperature
Not available.

Decomposition Temperature
60°C

Viscosity
24 mPa s @ 20°C

Explosive properties
Not considered to be explosive.

Oxidising properties
Not available.

9.2. Other information

Active Oxygen 8.8-9.0

SECTION 10: Stability and reactivity

10.1. Reactivity

See the other subsections of this section for further details.

10.2. Chemical stability

Stability
Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Reactions with the following materials may generate heat: Alkalis. Amines. Reducing agents. Strong acids.

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid

10.6. Hazardous decomposition products

Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD50)
Harmful if swallowed.

ATE oral (mg/kg)
Easy Composites SDS - MEKP

500.0

**Acute toxicity - dermal**

Notes (dermal LD50)
Based on available data the classification criteria are not met.

**Acute toxicity - inhalation**

Notes (inhalation LC50)
Based on available data the classification criteria are not met.

**Skin corrosion/irritation**

Animal data
Corrosive to skin.

**Serious eye damage/irritation**

Corrosivity to eyes is assumed.

**Respiratory sensitisation**

Based on available data the classification criteria are not met.

**Skin sensitisation**

Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

Genotoxicity - in vitro
Based on available data the classification criteria are not met.

**Carcinogenicity**

Based on available data the classification criteria are not met.

**Reproductive toxicity**

Reproductive toxicity - fertility
Based on available data the classification criteria are not met.

Reproductive toxicity - development
Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

STOT - single exposure
Based on available data the classification criteria are not met.

**Specific target organ toxicity - repeated exposure**

STOT - repeated exposure
Based on available data the classification criteria are not met.

**Aspiration hazard**

Based on available data the classification criteria are not met.

Toxicological information on ingredients.

**methyl ethyl ketone peroxide**

**Acute toxicity - oral**

Acute toxicity oral (LD50 mg/kg)
1,017.0

**Species**

Rat

**Notes (oral LD50)**

REACH dossier information. Based on available data the classification criteria are not met.

**ATE oral (mg/kg)**

1,017.0

**Acute toxicity - dermal**
Acute toxicity dermal (LD50 mg/kg)
4000.0

Species
Rabbit

Notes (dermal LD50)
REACH dossier information. Based on available data the classification criteria are not met.

ATE dermal (mg/kg)
4000.0

Acute toxicity - inhalation

Notes (inhalation LC50)
Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data
Dose: 0.5 mL, 24 hours, Rabbit Erythema/eschar score: Severe erythema (beef redness) to eschar formation preventing grading of erythema (4). Oedema score: Slight oedema - edges of area well defined by definite raising (2). REACH dossier information. Corrosive.

Serious eye damage/irritation
Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation
Based on available data the classification criteria are not met.

Skin sensitisation
Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro
Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity
Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility
Screening - NOAEL 75 mg/kg/day, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development
Neonatal toxicity - NOAEL: 50 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure
Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure
NOAEL 200 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Aspiration hazard
Based on available data the classification criteria are not met.

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)
Easy Composites SDS - MEKP

2,054.0

Species
Rat

Notes (oral LD50)
REACH dossier information. Based on available data the classification criteria are not met.

ATE oral (mg/kg)
2,054.0

Acute toxicity - dermal

Notes (dermal LD50)
Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC50)
Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data
Dose: 0.5 ml, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory sensitisation
Based on available data the classification criteria are not met.

Skin sensitisation
Buehler test - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro
Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo
Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity
Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility
Two-generation study - NOAEL 10000 mg/l, Oral, Rat F1 REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development
Maternal toxicity: - NOAEC: 1002 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure
STOT SE 3 - H336 May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure
NOAEC 5041 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.

Aspiration hazard
Based on available data the classification criteria are not met.
SECTION 12: Ecological Information

12.1. Toxicity
The product is not expected to be toxic to aquatic organisms. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

**methyl ethyl ketone peroxide**

Acute toxicity - fish
LC₅₀, 96 hours: 44.2 mg/l, Poecilia reticulata (Guppy)

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 26.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants
EC₅₀, 72 hours: 3.2 mg/l, Pseudokirchneriella subcapitata

**butanone**

Acute toxicity - fish
LC₅₀, 96 hours: 2993 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 308 mg/l, Daphnia magna

Acute toxicity - aquatic plants
EC₅₀, 96 hours: 2029 mg/l, Selenastrum capricornutum

12.2. Persistence and degradability
Persistence and degradability
The product is biodegradable.

Ecological information on ingredients.

**methyl ethyl ketone peroxide**

Persistence and degradability
The product is readily biodegradable.

Biodegradation
Water - Degradation 87%: 28 days

**butanone**

Persistence and degradability
The product is readily biodegradable.

Biodegradation
Water - Degradation 98%: 28 days

12.3. Bioaccumulative potential
No data available on bioaccumulation.

Partition coefficient
Not available.
Easy Composites SDS - MEKP

Ecological information on ingredients.

methyl ethyl ketone peroxide

No data available on bioaccumulation.

Partition coefficient

log Pow: < 0.3

butanone

No data available on bioaccumulation.

Partition coefficient

log Pow: 0.3

12.4. Mobility in soil

Mobility

The product is partly miscible with water and may spread in the aquatic environment.

Ecological information on ingredients.

methyl ethyl ketone peroxide

Mobility

The product is soluble in water.

butanone

Mobility

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

methyl ethyl ketone peroxide

This substance is not classified as PBT or vPvB according to current EU criteria.

butanone

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

None known.

Ecological information on ingredients.

methyl ethyl ketone peroxide

None known.

butanone

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods

Do not empty into drains. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3105
UN No. (IMDG) 3105
Easy Composites SDS - MEKP

UN No. (ICAO) 3105
UN No. (ADN) 3105

14.2. UN proper shipping name
Proper shipping name (ADR/RID) ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S))
Proper shipping name (IMDG) ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S))
Proper shipping name (ICAO) ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S))
Proper shipping name (ADN) ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S))

14.3. Transport hazard class(es)
ADR/RID class 5.2
ADR/RID label 5.2
IMDG class 5.2
ICAO class/division 5.2
ADN class 5.2

14.4. Packing group

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
EmS F-J, S-R
ADR transport category 2
Tunnel restriction code (D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not relevant.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations

EU legislation

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other Information
Revision comments
Revised Classification.
Easy Composites SDS - MEKP

Revision date: 11/09/2014
Revision: 3
Supersedes date: 25/07/2014

Risk phrases in full
R7 May cause fire.
R11 Highly flammable.
R22 Harmful if swallowed.
R34 Causes burns.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full
H225 Highly flammable liquid and vapour.
H242 Heating may cause a fire.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Disclaimer
This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.
SAFETY DATA SHEET
MODIFIED MDI ISOCYANATE CURATIVE

Section 1. Identification

GHS product identifier : MODIFIED MDI ISOCYANATE CURATIVE
Product code : 00022702
Chemical name : 4,4’-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1, 3-diol, 2,4’-diisocyanatodiphenylmethane, 1,1’-methylenebis(4-isocyanatobenzene) homopolymer, [(methylethylene)bis(oxy)]dipropanol and propane-1,2-diol
Other means of identification : Not available.
Product type : Liquid.
Material uses : Component of a Polyurethane System
Supplier's details : RCS ROCKET MOTOR COMPONENTS, INC
                    2113 W 850 N
                    Cedar City, UT 84721
                    TEL: (435) 865-7100

E-mail address of person responsible for this SDS : orders@rocketmotorparts.com
Emergency telephone number (24h/7day) : Infotrac: (800) 535-5053 and (352) 323-3500

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : ACUTE TOXICITY: INHALATION - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3

GHS label elements

Hazard pictograms : 

Signal word : Danger
Hazard statements : 

11/20/2016
Section 2. Hazards identification

Harmful if inhaled. Causes skin and eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation.

Precautionary statements:
Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Wear protective gloves. Wear eye or face protection. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification:
Not available.

Section 3. Composition/information on ingredients

Substance/mixture: Substance

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>30 - 60</td>
<td>101-68-8</td>
</tr>
<tr>
<td>4,4'-MDI HOMOPOLYMER/1,3-BD/PG/TPG (NCO-ENDED)</td>
<td>30 - 60</td>
<td>70644-57-4</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>13 - 30</td>
<td>25686-28-6</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>0.1 - 1</td>
<td>128-37-0</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation. Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures:

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation: Move exposed person to fresh air. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is laboured, oxygen should be administered by qualified personnel.

Skin contact: After contact with skin, wash immediately with plenty of warm soapy water: Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-TamTM, PEG-400) or corn oil may be more effective than soap and water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.
Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitisier: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons. LC50 (rat) : ca. 490 mg/m³ (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns.

Skin contact : Causes skin irritation. May cause sensitization by skin contact. Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitisers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

Ingestion : Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

Inhalation : Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
- wheezing and breathing difficulties
- asthma

Skin contact : Adverse symptoms may include the following:
- irritation
- redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Symptomatic treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)
Section 5. Fire-fighting measures

**Flash point**
- Closed cup: >210°C (>410°F) [EC A.9 Flash-Point (closed cup)]
- Open cup: >100°C (>212°F)

**Extinguishing media**
- Suitable extinguishing media: Foam, CO2 or dry powder.
- Unsuitable extinguishing media: Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.

**Specific hazards arising from the chemical**
- In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products**
- Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.

**Special protective actions for fire-fighters**
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.

**Remark**
- Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**
- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**For emergency responders**
- If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions**
- Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up**
- If the product is in its solid form: Spilled MDI flakes should be picked up carefully. The area should be vacuum cleaned to remove remaining dust particles completely. If the product is in its liquid form: Absorb spillages onto sand, earth or any suitable adsorbent material. Leave to react for at least 30 minutes. Shovel into open-top drums for further decontamination. Wash the spillage area with water. Test atmosphere for MDI vapour. Neutralise small spillages with decontaminant. Remove and dispose of residues. The compositions of liquid decontaminants are given in Section 16. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Keep container tightly closed in a cool, well-ventilated place. Keep away from moisture. Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Do not reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Unsuitable containers: Do not store in containers made of copper, copper alloys or galvanized surfaces.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4’ diisocyanate</td>
<td>ACGIH TLV (United States, 6/2013).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.005 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 2/2013).</td>
</tr>
<tr>
<td></td>
<td>CEIL: 0.02 ppm</td>
</tr>
<tr>
<td></td>
<td>CEIL: 0.2 mg/m³</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Diisocyanates can only be smelled if the occupational exposure limit has been exceeded considerably.

Medical supervision of all employees who handle or come in contact with respiratory sensitisers is recommended. Personnel with a history of asthma-type conditions, bronchitis or skin sensitisation conditions should not work with MDI based products. The Occupational Exposure Limits listed do not apply to previously sensitised individuals. Sensitised individuals should be removed from any further exposure.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**
### Section 8. Exposure controls/personal protection

**Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Hand protection**: Use chemical resistant gloves classified under Standard EN374: protective gloves against chemicals and microorganisms. Examples of glove materials that might provide suitable protection include: Butyl rubber, Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol copolymers laminated (“EVAL”), Polychloroprene (Neoprene*), Nitrile/butadiene rubber (“nitrile” or “NBR”), Polyvinyl chloride (“PVC” or “vinyl”), Fluoroelastomer (Viton*).

When prolonged or frequently repeated contact may occur, a glove with protection class of 5 or higher (breakthrough time greater then 240 minutes according to EN374) is recommended.

Contaminated gloves should be decontaminated and disposed of. Notice: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: other chemicals that may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as instructions/specifications provided by the glove supplier. Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Overall (preferably heavy cotton) or Tyvek-Pro Tech ’C’, Tyvek-Pro ’F’ disposable coverall.

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Thermal hazards**: Not available.

### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/Freezing point</td>
<td>-16.5 to -12.3°C (2.3 to 9.9°F)</td>
</tr>
<tr>
<td>Boiling/condensation point</td>
<td>&gt;300°C decomposes</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: &gt;210°C (&gt;410°F) [EC A.9 Flash-Point (closed cup)]</td>
</tr>
<tr>
<td></td>
<td>Open cup: &gt;100°C (&gt;212°F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

- **Flammability (solid, gas)**: Not available.
- **Lower and upper explosive (flammable) limits**: Not available.
- **Vapor pressure**: Not available.
- **Vapor density**: Not available.
- **Relative density**: Not available.
- **Solubility in water**: Insoluble
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: >600°C
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.
- **Solubility in water**: Insoluble

Section 10. Stability and reactivity

- **Reactivity**: No specific test data related to reactivity available for this product or its ingredients.
- **Chemical stability**: Stable at room temperature.
- **Possibility of hazardous reactions**: Reaction with water (moisture) produces CO2-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.
- **Conditions to avoid**: Avoid high temperatures.
- **Incompatible materials**: Water, alcohols, amines, bases, and acids.
- **Hazardous decomposition products**: Combustion products may include: carbon oxides (CO, CO₂) nitrogen oxides (NO, NO₂ etc.) hydrocarbons and HCN

Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-disocyanate</td>
<td>OECD 403 Acute Inhalation Toxicity</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>0.49 mg/l</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Dermal</td>
<td>Rabbit - Male, Female</td>
<td>&gt;9400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>OECD 401 Acute Oral Toxicity</td>
<td>LD50 Oral</td>
<td>Rat - Male</td>
<td>&gt;10000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>OECD 403 Acute Inhalation Toxicity</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>0.49 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 425 Acute Oral Toxicity: Up-and-</td>
<td>LD50 Oral</td>
<td>Rat - Female</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>
## Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4’-diisocyanate</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Irritant</td>
</tr>
<tr>
<td></td>
<td>OECD 405 Acute Eye Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Eyes - Non-irritant.</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Irritant</td>
</tr>
<tr>
<td></td>
<td>OECD 405 Acute Eye Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Eyes - Non-irritant.</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Non-irritant.</td>
</tr>
<tr>
<td>4,4’-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4’-diisocyanatodiphenylmethane, 1, 1’-methylenebis (4-isocyanatobenzene) homopolymer, [(methylene)bis(oxy)]dipropanol and propane-1, 2-diol</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Non-irritant.</td>
</tr>
</tbody>
</table>

### Down Procedure

<table>
<thead>
<tr>
<th>OECD 402 Acute Dermal Toxicity</th>
<th>LD50 Dermal</th>
<th>Rabbit - Male, Female</th>
<th>&gt;9400 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD 402 Acute Dermal Toxicity -</td>
<td>LD50 Intraperitoneal</td>
<td>Rabbit - Male, Female</td>
<td>&gt;2000 mg/kg</td>
</tr>
<tr>
<td>OECD 401 Acute Oral Toxicity</td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>890 mg/kg</td>
</tr>
<tr>
<td>OECD 403 Acute Inhalation Toxicity</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>&gt;2930 mg/kg</td>
</tr>
<tr>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Dermal</td>
<td>Rabbit - Male, Female</td>
<td>&gt;9400 mg/kg</td>
</tr>
<tr>
<td>OECD 402 Acute Dermal Toxicity</td>
<td>LD50 Oral</td>
<td>Rat - Female</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

### Conclusion/Summary

4,4’-Methylenediphenyl diisocyanate is irritating to the respiratory system.

### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>OECD 405 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Non-irritant.</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>OECD 404 Acute Dermal Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Skin - Non-irritant.</td>
</tr>
<tr>
<td>4,4’-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4’-diisocyanatodiphenylmethane, 1, 1’-methylenebis (4-isocyanatobenzene) homopolymer, [(methylene)bis(oxy)]dipropanol and propane-1, 2-diol</td>
<td>OECD 405 Acute Eye Irritation/Corrosion</td>
<td>Rabbit</td>
<td>Eyes - Non-irritant.</td>
</tr>
</tbody>
</table>
### Section 11. Toxicological information

**Skin**
- **Diphenylmethane 4,4’-diisocyanate**
  - Irritating to skin.
- **4,4’-MDI**
  - No additional information.
- **Homopolymer/1,3-BD/PG/TPG (NCO-ENDED)**
  - Homopolymer of methylenediphenyl diisocyanate
  - Irritating to skin.
- **2,6-di-tert-butyl-p-cresol**
  - Slightly irritating to the skin.

**Eyes**
- **Diphenylmethane 4,4’-diisocyanate**
  - Based on the human occupational exposure data, this substance is considered as irritating to eyes.
  - No additional information.
- **2,6-di-tert-butyl-p-cresol**
  - Slightly irritating to the eyes.

**Respiratory**
- **Diphenylmethane 4,4’-diisocyanate**
  - No additional information.
- **2,6-di-tert-butyl-p-cresol**
  - No additional information.

### Sensitization

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4’-diisocyanate</td>
<td>OECD 429 Skin Sensitization: Local Lymph Node Assay</td>
<td>skin</td>
<td>Mouse</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>OECD 406 Skin Sensitization</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>No official guidelines</td>
<td>Respiratory</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>4,4’-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4’-diisocyanatodiphenylmethane, 1,1’-methylenebis (4-isocyanatobenzene) homopolymer, [(methyleneethylene)bis(oxy)]</td>
<td>No official guidelines</td>
<td>Respiratory</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
</tr>
</tbody>
</table>

**11/20/2016**
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4’-diisocyanate</td>
<td>Experiment: In vitro</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Bacteria</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metabolic activation: +/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experiment: In vivo</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Mammalian-Animal</td>
<td></td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>Experiment: In vitro</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Bacteria</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metabolic activation: +/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experiment: In vivo</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Mammalian-Animal</td>
<td></td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>Experiment: In vitro</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Bacteria</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metabolic activation: +/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experiment: In vivo</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Mammalian-Animal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metabolic activation: +</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Experiment: In vivo</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Mammalian-Animal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metabolic activation: +/-</td>
<td>Negative</td>
</tr>
<tr>
<td>4,4’-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4'-disocyanatodiphenylmethane, 1,1’-methylenebis (4-isocyanatobenzene) homopolymer, [(methylethylene)bis(oxy)] dipropanol and propane-1,2-diol</td>
<td>Experiment: In vivo</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Subject: Mammalian-Animal</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion/Summary: 4,4’-Methylenediphenyl diisocyanate No mutagenic effect.

Carcinogenicity
### Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
<th>Result/Result type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>OECD 453 Combined Chronic</td>
<td>Rat - Male, Female</td>
<td>1 mg/m³</td>
<td>2 years; 5 days per week</td>
<td>Positive - Inhalation - NOAEL</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>Chronic Toxicity/ Carcinogenicity Studies</td>
<td>Rat - Male, Female</td>
<td>1 mg/m³</td>
<td>2 years; 5 days per week</td>
<td>Negative - Inhalation - NOAEL</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>No official guidelines</td>
<td>Rat - Male, Female</td>
<td>-</td>
<td>-</td>
<td>Negative - Oral - NOAEL</td>
</tr>
<tr>
<td>4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4'-diisocyanatodiphenylmethane, 1,1'-methylenebis (4-isocyanatobenzene) homopolymer, [(methylenelethylene)bis(oxy)] dipropanol and propane-1, 2-diol</td>
<td>OECD 453 Combined Chronic</td>
<td>Rat - Male, Female</td>
<td>1 mg/m³</td>
<td>2 years; 5 days per week</td>
<td>Negative - Inhalation - NOAEL</td>
</tr>
</tbody>
</table>

#### Reproductive toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Maternal toxicity</th>
<th>Fertility</th>
<th>Developmental effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>No official guidelines</td>
<td>Rat - Male, Female</td>
<td>Negative</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary:**

4,4'-Methylenediphenyl diisocyanate - No known significant effects or critical hazards.

#### Teratogenicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Species</th>
<th>Result/Result type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>OECD 414 Prenatal Developmental Toxicity Study</td>
<td>Rat - Female</td>
<td>Negative - Inhalation</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>OECD 414 Prenatal Developmental Toxicity Study</td>
<td>Rat - Male, Female</td>
<td>Negative - Inhalation</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>OECD 414 Prenatal Developmental Toxicity Study</td>
<td>Rat - Male, Female</td>
<td>Negative - Oral</td>
</tr>
<tr>
<td>4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4'-diisocyanatodiphenylmethane, 1,1'-methylenebis (4-isocyanatobenzene) homopolymer, [(methylenelethylene)bis(oxy)] dipropanol and propane-1, 2-diol</td>
<td>OECD 414 Prenatal Developmental Toxicity Study</td>
<td>Rat - Male, Female</td>
<td>Negative - Inhalation</td>
</tr>
</tbody>
</table>
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**[methylene|ethylene]bis(oxy)dipropanol and propane-1,2-diol**

<table>
<thead>
<tr>
<th>Conclusion/Summary</th>
<th>4,4'-Methylenediphenyl diisocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
</tbody>
</table>

## Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>4,4'-MDI HOMOPOLYMER/1,3-BD/PG/TPG (NCO-ENDED)</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

## Specific target organ toxicity (repeated exposure)

Not available.

## Aspiration hazard

Not available.

## Information on the likely routes of exposure

Not available.

## Potential acute health effects

### Eye contact

Causes eye irritation.

### Inhalation

Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons. LC50 (rat) : ca. 490 mg/m³ (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns.

### Skin contact

Causes skin irritation. May cause sensitization by skin contact. Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitizers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

### Ingestion

Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

## Symptoms related to the physical, chemical and toxicological characteristics

### Eye contact

Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

### Inhalation

Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
- wheezing and breathing difficulties
- asthma
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Skin contact: Adverse symptoms may include the following:
- irritation
- redness

Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Long term exposure

Potential immediate effects: Not available.
Potential delayed effects: Not available.

Potential chronic health effects

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Methylenediphenyl disiocyanate, oligomeric reaction products with butane-1,3-diol, 2,4'-diisocyanatodiphenylmethane, 1,1'-methylenebis (4-isocyanatobenzene) homopolymer, [(methylethylene)bis(oxy)] dipropanol and propane-1, 2-diol</td>
<td>OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies</td>
<td>Chronic NOEC Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>0.2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OECD 413 Subchronic Inhalation Toxicity: 90-day Study</td>
<td>Sub-chronic NOEC Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

General: May cause damage to organs through prolonged or repeated exposure if inhaled. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m3), there was a significant incidence of a benign tumour of the lung (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m3 and no effects at 0.2 mg/m3. Overall, the tumour incidence, both benign and malignant, and the number of animals with the tumours were not different from controls. The increased incidence of lung tumours is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumour formation will occur.

Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
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Developmental effects: No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal, respirable concentrations, which are well in excess of defined occupational exposure limits.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

<table>
<thead>
<tr>
<th>Acute toxicity estimates</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (dusts and mists)</td>
<td>1.5 mg/l</td>
</tr>
</tbody>
</table>

Other information: Not available.

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Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Endpoint</th>
<th>Exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>OECD 202 <em>Daphnia</em> sp. Acute Immobilisation Test</td>
<td>Acute</td>
<td>EC50</td>
<td>24 hours Static</td>
<td><em>Daphnia</em></td>
</tr>
<tr>
<td></td>
<td>OECD 203 Fish, Acute Toxicity Test</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>OECD 211 <em>Daphnia Magna</em> Reproduction Test</td>
<td>Chronic</td>
<td>NOEC</td>
<td>21 days Semi-static</td>
<td><em>Daphnia</em></td>
</tr>
<tr>
<td>Homopolymer of methylenediisophenyl diisocyanate</td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>72 hours Static</td>
<td><em>Algae</em></td>
</tr>
<tr>
<td></td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>72 hours Static</td>
<td><em>Algae</em></td>
</tr>
<tr>
<td></td>
<td>OECD 209 Activated Sludge, Respiration Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>3 hours Static</td>
<td><em>Bacteria</em></td>
</tr>
<tr>
<td></td>
<td>OECD 202 <em>Daphnia</em> sp. Acute Immobilisation Test</td>
<td>Acute</td>
<td>EC50</td>
<td>24 hours Static</td>
<td><em>Daphnia</em></td>
</tr>
<tr>
<td></td>
<td>OECD 203 Fish, Acute Toxicity Test</td>
<td>Acute</td>
<td>LC50</td>
<td>96 hours Static</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td>OECD 211 <em>Daphnia Magna</em> Reproduction Test</td>
<td>Chronic</td>
<td>NOEC</td>
<td>21 days Semi-static</td>
<td><em>Daphnia</em></td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>EU EC C.3 Algal Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>72 hours Static</td>
<td><em>Algae</em></td>
</tr>
<tr>
<td></td>
<td>EU EC 88/302/EC</td>
<td>Acute</td>
<td>EC50</td>
<td>3 hours Static</td>
<td><em>Bacteria</em></td>
</tr>
<tr>
<td></td>
<td>OECD 202 <em>Daphnia</em> sp. Acute Immobilisation Test</td>
<td>Acute</td>
<td>EC50</td>
<td>48 hours Static</td>
<td><em>Daphnia</em></td>
</tr>
<tr>
<td></td>
<td>EU EC 88/302/EC</td>
<td>Chronic</td>
<td>EC0</td>
<td>3 hours Static</td>
<td><em>Bacteria</em></td>
</tr>
<tr>
<td></td>
<td>EU EC C.2 Acute</td>
<td>Chronic</td>
<td>EC0</td>
<td>48 hours Static</td>
<td><em>Daphnia</em></td>
</tr>
</tbody>
</table>
### Section 12. Ecological information

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Endpoint</th>
<th>Type</th>
<th>Duration</th>
<th>Species</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity for Daphnia</td>
<td>EU EC C.1 Acute Toxicity for Fish</td>
<td>Static</td>
<td>96 hours</td>
<td>Fish</td>
<td>&gt;0.57 mg/l</td>
</tr>
<tr>
<td></td>
<td>EU EC C.3 Algal Inhibition Test</td>
<td>Chronic</td>
<td>LC0</td>
<td>Algae</td>
<td>&gt;0.42 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD OECD 202: Part II (Daphnia sp., Reproduction Test)</td>
<td>Chronic</td>
<td>NOEC</td>
<td>Daphnia</td>
<td>0.316 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 201 Alga, Growth Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>Algae</td>
<td>&gt;1640 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 209 Activated Sludge, Respiration Inhibition Test</td>
<td>Acute</td>
<td>EC50</td>
<td>Bacteria</td>
<td>&gt;100 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 202 Daphnia sp. Acute Immobilisation Test</td>
<td>Chronic</td>
<td>NOEC</td>
<td>Daphnia</td>
<td>&gt;1000 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 203 Fish, Acute Toxicity Test</td>
<td>Acute</td>
<td>LC50</td>
<td>Fish</td>
<td>&gt;1000 mg/l</td>
</tr>
<tr>
<td></td>
<td>OECD 211 Daphnia Magna Reproduction Test</td>
<td>Chronic</td>
<td>NOEC</td>
<td>Daphnia</td>
<td>&gt;10 mg/l</td>
</tr>
</tbody>
</table>

### Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test Description</th>
<th>Period</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4’-diisocyanate</td>
<td>OECD 302C Inherent Biodegradability: Modified MITI Test (II)</td>
<td>28 days</td>
<td>0 %</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl diisocyanate</td>
<td>OECD 302C Inherent Biodegradability: Modified MITI Test (II)</td>
<td>28 days</td>
<td>0 %</td>
</tr>
<tr>
<td>4,4’-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4’-diisocyanatodiphenylmethane, 1,1’-methylenebis (4-isocyanatobenzene) homopolymer, [(methylene)bis(oxy)] dipropanol and propane-1, 2-diol</td>
<td>OECD 302C Inherent Biodegradability: Modified MITI Test (II)</td>
<td>28 days</td>
<td>0 %</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**: 4,4’-Methylenediphenyl diisocyanate is not biodegradable.
## Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Methylenediphenyl disocyanate, oligomeric reaction products with butane-1,3-diol, 2,4'-disocyanatodiphenylmethane, 1,1'-methylenebis (4-isocyanatobenzene) homopolymer, [ (methyleneethylene)bis(oxy)] dipropanol and propane-1, 2-diol</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>Diphenylmethane 4,4' - diisocyanate</td>
<td>Fresh water 0.83 days</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl disocyanate</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>-</td>
<td>-</td>
<td>Inherent</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Methylenediphenyl disocyanate, oligomeric reaction products with butane-1,3-diol, 2,4'-disocyanatodiphenylmethane, 1,1'-methylenebis (4-isocyanatobenzene) homopolymer, [ (methyleneethylene)bis(oxy)] dipropanol and propane-1, 2-diol</td>
<td>15.98</td>
<td>200</td>
<td>low</td>
</tr>
<tr>
<td>Diphenylmethane 4,4' - diisocyanate</td>
<td>4.51</td>
<td>200</td>
<td>low</td>
</tr>
<tr>
<td>Homopolymer of methylenediphenyl disocyanate</td>
<td>8.56</td>
<td>200</td>
<td>low</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-p-cresol</td>
<td>5.1</td>
<td>330 to 1800</td>
<td>high</td>
</tr>
</tbody>
</table>

### Mobility in soil

**Mobility**

By considering the production and use of the substance, it is unlikely that significant environmental exposure in the air or water will arise. Immiscible with water, but will react with water to produce inert and non-biodegradable solids. Conversion to soluble products, including diamino- diphenylmethane (MDA), is very low under the optimal laboratory conditions of good dispersion and low concentration. In air, the predominant degradation process is predicted to be a relatively rapid OH radical attack, by calculation and by analogy with related diisocyanates.

### Other adverse effects

No known significant effects or critical hazards.

### Other ecological information

**BOD5**

Not determined.
Section 12. Ecological information

TOC : Not determined.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (Methylene Diphenyl Diisocyanate)
TDG : Not regulated.
IMDG : Not regulated.
IATA : Not regulated.

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Classes</th>
<th>PG*</th>
<th>Label</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>NA3082</td>
<td>9</td>
<td>III</td>
<td></td>
<td>Reportable quantity5000 lbs. (2270 kg) Single containers less than 5,000 lbs. are not regulated.</td>
</tr>
<tr>
<td>TDG Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IMDG Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IATA Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

PG* : Packing group
## Section 15. Regulatory information

### Safety, health and environmental regulations specific for the product

#### United States Regulations

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA 8(b) inventory</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>TSCA 5(a)2 final significant new use rule (SNUR)</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>TSCA 5(e) substance consent order</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>TSCA 12(b) export notification</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>SARA 311/312</td>
<td>Immediate (acute) health hazard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product name</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Methylenediphenyl diisocyanate</td>
<td>47.265 - 55.043</td>
</tr>
</tbody>
</table>

#### Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

This product does not contain nor is it manufactured with ozone depleting substances.

<table>
<thead>
<tr>
<th>Product name</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>47.265 - 55.043</td>
</tr>
</tbody>
</table>

#### Clean Air Act - Ozone Depleting Substances (ODS)

<table>
<thead>
<tr>
<th>Product name</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4'-diisocyanate</td>
<td>47.265 - 55.043</td>
</tr>
</tbody>
</table>

#### SARA 313 Form R - Reporting requirements

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>Section 304 CERCLA Hazardous Substance</th>
<th>CERCLA Reportable Quantity (Lbs)</th>
<th>Product Reportable Quantity (Lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane 4,4' diisocyanate</td>
<td>45.7</td>
<td>Listed</td>
<td>5000</td>
<td>10941</td>
</tr>
</tbody>
</table>

### State regulations

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENNSYLVANIA - RTK</td>
<td>4,4'-Methylenediphenyl diisocyanate</td>
</tr>
<tr>
<td>California Prop 65</td>
<td>No ingredients listed.</td>
</tr>
<tr>
<td>Canadian regulations</td>
<td></td>
</tr>
<tr>
<td>CEPA DSL</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>WHMIS Classes</td>
<td>WHMIS Class D-2A: Material causing other toxic effects (Very toxic).</td>
</tr>
<tr>
<td></td>
<td>WHMIS Class D-2B: Material causing other toxic effects (Toxic).</td>
</tr>
</tbody>
</table>

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.**
Section 15. Regulatory information

Classification system used: Norma ABNT-NBR 14725-2:2012

International lists:
- Australia inventory (AICS): At least one component is not listed.
- China inventory (IECSC): At least one component is not listed.
- Japan inventory: Not determined.
- Korea inventory: At least one component is not listed.
- Malaysia Inventory (EHS Register): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
- Philippines inventory (PICCS): At least one component is not listed.
- Taiwan inventory (CSNN): Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.):

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.):

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing: 11/20/2016
Date of issue: 11/20/2016
Date of previous issue: 11/20/2016
Version: 1
Section 16. Other information

Liquid decontaminants (percentages by weight or volume):
Decontaminant 1: *- sodium carbonate: 5 - 10 % *- liquid detergent: 0.2 - 2 % *- water: to make up to 100 %
Decontaminant 2: *- concentrated ammonia solution: 3 - 8 % *- liquid detergent: 0.2 - 2 % *- water: to make up to 100 %

Decontaminant 1 reacts slower with diisocyanates but is more environmentally friendly than decontaminant 2.
Decontaminant 2 contains ammonia. Ammonia presents health hazards. (See supplier safety information.)

Literature reference: PU 193-1: 'MDI-Based Compositions: Hazards and Safe Handling Procedures.'
PU 181-15: Recommended melting procedures for MDI-based isocyanates.
ISOPA Guidelines for safe Loading/Unloading, Transportation, Storage of TDI and MDI, Ref.03-96 PSC-0005-GUIDL.
SPI PMDI User Guidelines for the Chemical Protective Clothing Selection.

Notice to reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED RCS RMC, INC. EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR RCS RMC, INC. PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM RCS RMC, INC. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO RCS RMC, INC., MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.
## Section 1 - Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product/Chemical Name:</th>
<th>THI-VEX®</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Use:</td>
<td>Silicone Elastomer</td>
</tr>
<tr>
<td>Manufacturer:</td>
<td>Smooth-On Inc., 2000 St. John St., Easton PA 18042</td>
</tr>
<tr>
<td>Phone</td>
<td>(610) 252-5800, FAX (610) 252-6200</td>
</tr>
<tr>
<td>Emergency Contact:</td>
<td>Chem-Tel</td>
</tr>
<tr>
<td>Domestic</td>
<td>800-255-3924</td>
</tr>
<tr>
<td>International</td>
<td>813-248-0585</td>
</tr>
</tbody>
</table>

## Section 2 - Hazards Identification


### HMIS

<table>
<thead>
<tr>
<th>H</th>
<th>F</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

## Section 3 - Composition / Information on Ingredients

No hazardous ingredients

## Section 4 - First Aid Measures

**Inhalation:** Remove source(s) of contamination and move victim to fresh air.

**Eye Contact:** Flush eyes with plenty of water. If irritation persists, seek medical attention.

**Skin Contact:** In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse.

**Ingestion:** Do not induce vomiting unless instructed by a physician. Contact physician immediately.

*After first aid, get appropriate in-plant, paramedic, or community medical support.*

## Section 5 - Fire-Fighting Measures

**Flash Point:** >356 °F (180 °C)

**Flash Point Method:** PMCC

**LEL:** Not Established

**UEL:** Not Established

**Flammability Classification:** Non-Flammable

**Extinguishing Media:** Dry Chemical, Carbon Dioxide, and Foam

**Unusual Fire or Explosion Hazards:** None

**Fire-Fighting Instructions:** Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.
Section 6 - Accidental Release Measures

Spill /Leak Procedures: Dike and contain spill; absorb or scrape up excess into suitable container for disposal. Stop or reduce discharge if it can be done safely.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Use good general housekeeping procedures.

Storage Requirements: Store in cool dry, well-ventilated area.

Section 8 - Exposure Controls / Personal Protection

Respiratory Protection: Follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Viscous Liquid

Appearance: Pale-Yellow viscous liquid

Odor: Mild odor

Vapor Pressure: None (Polymeric Resin)

Vapor Density (Air=1): >1

Specific Gravity (H2O=1, at 4 °C): 0.96

Water Solubility: Soluble

Boiling Point: None (Polymeric Resin)

% Volatile: Nil

Freezing/Melting Point: 19°F (-7°C)

Viscosity: 18 poise

Evaporation Rate: Not Applicable

Section 10 - Stability and Reactivity

Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization can not occur.

Chemical Incompatibilities: Strong bases, and acids.

Hazardous Decomposition Products: Silica, carbon monoxide and carbon dioxide
Section 11 - Toxicological Information

Eye Effects: Irritation  
Skin Effects: Irritation  
Carcinogenicity: None Determined  
Mutagenicity: None Determined  
Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: Must be disposed of in accordance with applicable Federal, state and local regulations.

Section 14 - Transport Information

DOT  
IATA  
IMDG  
Not Regulated

Section 15 - Regulatory Information

United States Regulations

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)  
SARA Toxic Chemical (40 CFR 372.65): None  
These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

TSCA Inventory Status (40 CFR710): All components of this formulation are listed in the TSCA Inventory.

California Proposition 65: This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

CANADA Regulations

WHMIS Identification: Not controlled  
CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): All are Listed

Labeling according to EEC Directive

No special packaging or labeling requirements.
Section 16 - Other Information

Disclaimer: The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user’s obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: .......................................................... WEST SYSTEM® 209 Extra Slow Hardener
CHEMICAL FAMILY: ...................................................... Polyamine-polyamide blend.
INTENDED PRODUCT USES: Curing agent for epoxy resins.
PRODUCT RESTRICTIONS: None identified.
SDS VERSION: 209-2016a

MANUFACTURER:
Gougeon Brothers, Inc.
100 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS (24 HRS):
Transportation CHEMTREC............... 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation Poison Hotline: ................. 800-222-1222

2. HAZARDS IDENTIFICATION

Classification of Substance or Mixture

Acute toxicity, Oral, Category 4
Skin corrosion/irritation, Category 1B
Skin sensitizer, Category 1
Eye damage/irritation, Category 1
Specific target organ toxicity (repeated exposure - oral), Category 2
Specific target organ toxicity (single exposure – inhalation), Category 3
Acute aquatic toxicity, Category 2
Chronic aquatic toxicity, Category 2

Label Elements

Hazard Pictogram(s):

![Hazard Pictogram]

Signal Word:
DANGER

Hazard Statements:
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H335 May cause respiratory irritation
H373 May cause damage to organs through prolonged or repeated exposure if swallowed
H411 Toxic to aquatic life with long lasting effects

Precautionary Statements:
Prevention
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well ventilated area
P272 Contaminated work clothing should not be allowed out of the workplace
P273 Avoid release to the environment
P280 Wear protective gloves/protective clothing/eye protection/face protection

Response
P301 + P330 + 331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse with soap and water (or shower).
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 Immediately call a POISON CENTER or doctor
P313 + P333 If irritation or rash occurs: Get medical attention/advice
P362 + P364 Take of contaminated clothing and wash it before reuse
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391 Collect spillage

Storage

Last Revised: 15AUG16
WEST SYSTEM® 209 Extra Slow Hardener

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS #</th>
<th>CONCENTRATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18-unsatd., dimers, polymers with tall oil fatty acids and triethylenetetramine</td>
<td>68082-29-1</td>
<td>30-50</td>
</tr>
<tr>
<td>Methylenebicyclohexanamine, 4,4′-</td>
<td>1761-71-3</td>
<td>20-40</td>
</tr>
<tr>
<td>Polyoxypropylenediamine</td>
<td>9046-10-0</td>
<td>5-15</td>
</tr>
<tr>
<td>Mixed cycloaliphatic amines</td>
<td>135108-88-2</td>
<td>5-15</td>
</tr>
<tr>
<td>Reaction products of MXDA with phenol and formaldehyde</td>
<td>57214-10-5</td>
<td>4-8</td>
</tr>
<tr>
<td>Benzene-1,3-dimethanamine</td>
<td>1477-55-0</td>
<td>1-5</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>1-5</td>
</tr>
</tbody>
</table>

The exact chemical identity and/or exact percentage (concentration) of each ingredient has been held as confidential business information (CBI). Refer to Section 15 for additional information regarding this CBI claim.

4. FIRST AID MEASURES

FIRST AID FOR EYES: SYMPTOMS: Causes eye burns and eye damage. RESPONSE: Flush immediately with water for at least 15 minutes. Remove contact lenses if present and easy to do. Immediately call a POISON CONTROL CENTER or doctor.

FIRST AID FOR SKIN: SYMPTOMS: Causes skin burns, redness and irritation. May cause allergic skin reaction and sensitization. RESPONSE: Immediately wash skin with soap and water. Immediately call a POISON CONTROL CENTER or doctor.

FIRST AID FOR INHALATION: SYMPTOMS: Can cause respiratory irritation, shortness of breath or cough. RESPONSE: Remove to fresh air if effects occur and keep comfortable for breathing.

FIRST AID FOR INGESTION: SYMPTOMS: May cause gastrointestinal irritation or ulceration. May cause burns of the mouth and throat. Can enter the lungs and cause damage. RESPONSE: Rinse mouth with water. DO NOT induce vomiting. If vomiting should occur, keep airway clear. Immediately call POISON CONTROL CENTER or doctor.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: SUITABLE: Foam, carbon dioxide (CO₂), dry chemical, sand, limestone powder. NON-SUITABLE: Direct water stream.

FIRE AND EXPLOSION HAZARDS: During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: oxides of nitrogen, carbon monoxide, carbon dioxide, volatile amines, ammonia, nitric acid, cyanides, aldehydes, nitrosamines. When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. Heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust.

SPECIAL FIRE FIGHTING PROCEDURES: Use full-body protective gear and a self-contained breathing apparatus. Use of water may generate toxic aqueous solutions. Do not allow water run-off from fighting fire to enter drains or other water courses.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT: Keep unnecessary and unprotected personnel from entering area. Use appropriate safety and personal protective equipment as indicated in Section 8.

MITIGATION AND CLEAN UP PROCEDURES: Stop leak without additional risk. Isolate area. Dike and absorb with inert material (e.g., sand) and collect in a suitable, closed container. Do not use sawdust, wood chips or other cellulosic materials to absorb the spill, as the possibility for spontaneous combustion exists. Warm, soapy water may be used to clean residual.

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and groundwater. See Section 12 for environmental impact information.

7. HANDLING AND STORAGE
WEST SYSTEM® 209 Extra Slow Hardener

STORAGE TEMPERATURE (min./max.): .......................... 40°F (4°C) / 90°F (32°C).

STORAGE: .......................................................... Store in cool, dry place away from high temperatures and moisture. Keep container tightly closed. Store in a secure location with restricted access or store locked up. Store away from incompatible materials listed in Section 10.

HANDLING PRECAUTIONS: ...................................... Use with adequate ventilation. Do not breathe vapors or mists from heated material. Avoid exposure to concentrated vapors. Avoid skin and eye contact. Wash thoroughly after handling. When mixed with epoxy resin this product causes an exothermic reaction, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION GUIDELINES: ................................. Chemical splash-proof goggles or face shield.

SKIN PROTECTION GUIDELINES: .............................. Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION GUIDELINES: .................. Use with adequate general ventilation and/or local ventilation to keep exposures below established limits. When ventilation cannot be made adequate enough to keep exposures below established limits, use a NIOSH approved respirator with an organic vapor cartridge, organic vapor cartridge + P100, or a multi-contaminant cartridge, depending on specific workplace conditions. Consult with your respirator and cartridge supplier to ensure proper selection of respirator and cartridge based on ingredients listed in Section 3 and specific workplace conditions. Use and select a respirator according the guidelines established in OSHA 1910.134 or other applicable respiratory protection standard.

ADDITIONAL PROTECTIVE MEASURES: ..................... Use where there is immediate access to safety shower and emergency eye wash. Wash thoroughly after use. Contact lens should not be worn when working with this material. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: .......................... Exposure limits may not be established for this product as a whole. For established exposure limits of specific ingredients in this product, or other available exposure limit information, refer to the table below.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>Exposure Limit Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18-unsatd., dimers, polymers with tall oil fatty acids and triethylenetetramine</td>
<td>68082-29-1</td>
<td>No data available</td>
</tr>
<tr>
<td>Methylenebis(cyclohexanamine, 4,4')</td>
<td>1761-71-3</td>
<td>No data available</td>
</tr>
<tr>
<td>Polyoxypropylenediamine</td>
<td>9046-10-0</td>
<td>No data available</td>
</tr>
<tr>
<td>Mixed cycloaliphatic amines</td>
<td>135108-88-2</td>
<td>No data available</td>
</tr>
<tr>
<td>Reaction products of MXDA with phenol and formaldehyde</td>
<td>57214-10-5</td>
<td>No data available</td>
</tr>
<tr>
<td>Benzene-1,3-dimethanamine</td>
<td>1477-55-0</td>
<td>ACGIH TLV: 0.1 mg/m³ Ceiling; SKIN</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>AIHA WEEL: 1 ppm ; 6 mg/m³; SKIN</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: .................................................. Liquid.
COLOR: .......................................................... Amber
ODOR: ........................................................... Ammonia-like
ODOR THRESHOLD: ............................................... No data available
pH ............................................................. 11.5
MELTING POINT / FREEZING POINT ...................... No data.
BOILING POINT (760mm/Hg): ............................... > 400°F (204°C) estimated based on similar product.
FLASH POINT: .................................................... Estimated > 200°F (93°C) estimated based similar product.
AUTO IGNITION TEMPERATURE ............................... No data.
LOWER EXPLOSIVE LIMIT (LEL) ............................. No data.
UPPER EXPLOSIVE LIMIT (UEL) ............................. No data.
VAPOR PRESSURE ............................................... < 1 mmHg @ 20°C (estimated based on ingredient data).
SPECIFIC GRAVITY / DENSITY (water = 1) ............... 0.96
BULK DENSITY .................................................. 7.99 lbs./gal. (0.96 kg/L)
VAPOR DENSITY (air = 1) ..................................... No data.
EVAPORATION RATE (Butyl Acetate = 1) ................. No data.
WATER SOLUBILITY (% BY WT) .............................. No data.
PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow)  | No data. |
KINEMATIC VISCOSITY ........................................ 67.3 (mm²/s @ 40°C)
DECOMPOSITION TEMPERATURE ............................. No data available.
% VOLATILE BY WEIGHT: ....................................... ASTM 2369-07 was used to determine the Volatile Matter Content of mixed epoxy resin and hardener. The combined VOC content for the resin and hardener system is listed below.

<table>
<thead>
<tr>
<th>Resin/Hardener</th>
<th>VOC Content (g/L)</th>
<th>(lbs./gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10S / 209</td>
<td>19.3</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Last Revised: 15AUG16
10. STABILITY AND REACTIVITY

STABILITY: Product is stable at normal temperatures and pressures.

REACTIVITY/HAZARDOUS REACTIONS: Product will not react by itself. A mass of more than one pound of product plus an epoxy resin will cause irreversible polymerization with significant heat buildup and pressure.

INCOMPATIBILITIES: Avoid acids, oxidizing materials, halogenated organic compounds (e.g., methylene chloride). Avoid nitrous acid, nitrites and atmospheres with high nitrous oxide concentrations. Avoid sodium hypochlorite (bleach) and peroxides. External heating or self-heating could result in rapid temperature increase and pressure build up. If such a condition were to occur in a drum, the drum could expand and rupture violently.

CONDITIONS TO AVOID: Avoid excessive heat.

DECOMPOSITION PRODUCTS: Very toxic fumes and gases when burned or otherwise heated to decomposition. Decomposition products may include, but not limited to: oxides of nitrogen, volatile amines, ammonia, nitric acid, cyanides, nitrosamines.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS#</th>
<th>LD₅₀ Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18-unsatd., dimers, polymers with tall oil fatty acids and triethylentetramine</td>
<td>68082-29-1</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Methylenebis(cyclohexanamine, 4,4'-)</td>
<td>1761-71-3</td>
<td>380 mg/kg</td>
<td>&gt;1000 mg/kg</td>
<td>No data</td>
</tr>
<tr>
<td>Polyoxypropylenediamine</td>
<td>9046-10-0</td>
<td>2585 mg/kg</td>
<td>2980 mg/kg</td>
<td>&gt;0.74 mg/L 8h mist</td>
</tr>
<tr>
<td>Mixed cycloaliphatic amines</td>
<td>135108-88-2</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Reaction products of MXDA with phenol and formaldehyde</td>
<td>57214-10-5</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Benzene-1,3-dimethanamine</td>
<td>1477-55-0</td>
<td>930 mg/kg</td>
<td>2000 mg/kg</td>
<td>1.34 mg/L 4h mist</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>1716.2 mg/kg</td>
<td>805 mg/kg</td>
<td>No data</td>
</tr>
</tbody>
</table>


SKIN CORROSION / IRRITATION: Category 1B. Causes severe skin burns. Effects may be immediate. May cause persistent irritation or dermatitis.

SERIOUS EYE DAMAGE / IRRITATION: Category 1. Causes serious eye damage. May cause blurred vision. May cause corneal damage resulting in vision impairment or even blindness.

RESPIRATORY SENSITIZATION: No data available.

SKIN SENSITIZATION: Category 1. May cause allergic skin reaction.

REPRODUCTIVE TOXICITY: Not classified. Does not meet classification criteria.

MUTAGENICITY: Not classified. Does not meet classification criteria.

CARCINOGENICITY: Not classified. Does not meet classification criteria.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): Category 3. May cause respiratory irritation.

SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure): STOT RE Category 2. Repeated ingestion can result in damage to the following organs/biological systems: liver, muscles, skeletal.

ASPIRATION HAZARD: Not classified. Does not meet classification criteria.

OTHER HEALTH HAZARD INFORMATION: Aerosol or mist may be corrosive to the respiratory system. Severe inhalation exposures can result in delayed lung damage.

12. ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: Category 2. Toxic to aquatic life. Calculated Estimate. No specific test data available for the mixture.

CHRONIC AQUATIC TOXICITY: Category 2. Toxic to aquatic life with long lasting effects. Calculated Estimate. No specific test data available for the mixture.
PERSISTANCE AND BIODEGRADABILITY: ........................................... No specific test data available for the mixture.

MOBILITY IN SOIL: ........................................................................ No specific test data available for the mixture.

ADDITIONAL ECOTOXICITY INFORMATION: . In the liquid, uncured state, this product may be harmful to aquatic life with long lasting effects. Prevent release to the environment, sewers and natural waters.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS#</th>
<th>Ecotoxicity Classification Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C18-unsatd., dimers, polymers with tall oil fatty acids and triethylenetetramine</td>
<td>68082-29-1</td>
<td>Chronic Aquatic 2</td>
</tr>
<tr>
<td>Methylenebiscyclohexanamine, 4,4'</td>
<td>1761-71-3</td>
<td>Acute Aquatic Cat. 2; Chronic Aquatic Cat. 2</td>
</tr>
<tr>
<td>Polyoxypyrolenediamine</td>
<td>9046-10-0</td>
<td>Acute Aquatic Cat. 3; Chronic Aquatic Cat. 2</td>
</tr>
<tr>
<td>Mixed cycloaliphatic amines</td>
<td>135108-88-2</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reaction products of MXDA with phenol and formaldehyde</td>
<td>57214-10-5</td>
<td>Acute Aquatic Cat. 1; Chronic Aquatic Cat. 1</td>
</tr>
<tr>
<td>Benzene-1,3-dimethanamine</td>
<td>1477-55-0</td>
<td>Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-24-3</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: ................................................................................................................ Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

US DOT
UN NUMBER: ................................................................. UN 2735
SHIPPING NAME: ........................................................... Polyamines, liquid, corrosive, n.o.s.
TECHNICAL SHIPPING NAME: ........................................... Methylenebiscyclohexanamine, 4,4'-
HAZARD CLASS:............................................................ Class 8
PACKING GROUP: .......................................................... PG III
MARINE POLLUTANT: ..................................................... No

CANADA TDG
UN NUMBER: ................................................................. UN 2735
SHIPPING NAME: ........................................................... Polymers, liquid, corrosive, n.o.s.
TECHNICAL SHIPPING NAME: ........................................... Methylenebiscyclohexanamine, 4,4'-
HAZARD CLASS:............................................................ Class 8
PACKING GROUP: .......................................................... PG III
MARINE POLLUTANT: ..................................................... No

IMDG
UN NUMBER: ................................................................. UN 2735
SHIPPING NAME: ........................................................... Polymers, liquid, corrosive, n.o.s.
TECHNICAL SHIPPING NAME: ........................................... Methylenebiscyclohexanamine, 4,4'-
HAZARD CLASS:............................................................ Class 8
PACKING GROUP: .......................................................... PG III
EmS Number: ........................................................................ F-A, S-B
MARINE POLLUTANT: ..................................................... Yes

ICAO/IATA
UN NUMBER: ................................................................. UN 2735
SHIPPING NAME: ........................................................... Polymers, liquid, corrosive, n.o.s.
TECHNICAL SHIPPING NAME: ........................................... Methylenebiscyclohexanamine, 4,4'-
HAZARD CLASS:............................................................ Class 8
PACKING GROUP: .......................................................... PG III
MARINE POLLUTANT: ..................................................... Yes

15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>INVENTORY LIST</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>TSCA</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Europe</td>
<td>EINECS or ELINCS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Canada</td>
<td>CEPA (DSL/NDSL)</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Australia</td>
<td>AICS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>Japan</td>
<td>ENCS</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>South Korea</td>
<td>KECI</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
<tr>
<td>China</td>
<td>IECSC</td>
<td>All ingredients are listed or otherwise compliant.</td>
</tr>
</tbody>
</table>
US EPA SARA TITLE III Reporting and Notification Requirements:
- Subject to Section 302 (TPQ): No data available.
- Subject to Section 304 (RQ): No data available.
- Subject to Section 311 or 312: Immediate, Delayed.
- Subject to Section 313: No data available.

Canada WHMIS Confidential Business Information (CBI): The HMIRA number issued for this CBI claim is #10266. The date of filing is 2016-08-08.

US STATE REGULATORY INFORMATION:
The following chemicals may be specifically regulated by individual states. For details on state regulatory requirements you should contact the appropriate state agency.

<table>
<thead>
<tr>
<th>COMPONENT NAME</th>
<th>CAS NUMBER</th>
<th>STATE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene oxide</td>
<td>75-56-9</td>
<td></td>
</tr>
<tr>
<td>Benzene-1,3-dimethanamine</td>
<td>1477-55-0</td>
<td>MA, PA, NJ</td>
</tr>
<tr>
<td>Triethylenetetramine</td>
<td>112-14-3</td>
<td>MA, PA, NJ</td>
</tr>
</tbody>
</table>

1. These substances are known to the state of California to cause cancer or reproductive harm, or both.

16. OTHER INFORMATION

REASON FOR ISSUE: Updates to Section 3 and 15 regarding Canada WHMIS 2015 compliance.
PREPARED BY: G. M. House
APPROVED BY: G. M. House
SDS CONTACT: safety@gougeon.com
TITLE: Health, Safety & Environmental Manager
APPROVAL DATE: August 15, 2016
SUPERSEDES DATE: June 1, 2015
SDS VERSION: 209-2016a

OTHER HAZARD INFORMATION AND RATING SYSTEMS:

HMIS® RATING

<table>
<thead>
<tr>
<th>HEALTH:</th>
<th>FLAMMABILITY:</th>
<th>PHYSICAL HAZARD:</th>
<th>PERSONAL PROTECTION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

NFPA® 704 CODES

Approximate HMIS and NFPA Risk Ratings Legend:
0 = Low or None; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

Information in this document is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Gougeon Brothers, Inc. The data on this sheet is related only to the specific material designated herein. Gougeon Brothers, Inc. assumes no legal responsibility for use or reliance upon these data.
1. Identification

Product identifier: White Lithium Grease

Other means of identification:
- Product Code: No. 03080 (Item# 1003341)
- Recommended use: Lubricating grease
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information:
- Company name: CRC Industries, Inc.
- Address: 885 Louis Dr.
  Warminster, PA 18974 US
- Telephone:
  - General Information: 215-674-4300
  - Technical Assistance: 800-521-3168
  - Customer Service: 800-272-4620
  - 24-Hour Emergency: 800-424-9300 (US)
  - CHEMTREC: 703-527-3887 (International)
- Website: www.crcindustries.com

2. Hazard(s) identification

Physical hazards:
- Flammable aerosols: Category 1
- Gases under pressure: Liquefied gas

Health hazards:
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 2B
- Reproductive toxicity (fertility): Category 2
- Specific target organ toxicity, single exposure: Category 3 narcotic effects
- Aspiration hazard: Category 1

Environmental hazards:
- Hazardous to the aquatic environment, acute hazard: Category 2
- Hazardous to the aquatic environment, long-term hazard: Category 2

OSHA defined hazards:
- Not classified.

Label elements:
- Signal word: Danger
- Hazard statement:
  Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility. Toxic to aquatic life with long lasting effects.
Precautionary statement

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or ignition source. Pressurized container: Do not pierce or burn, even after use. Do not apply while equipment is energized. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Collect spillage.

Storage

Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquefied petroleum gas</td>
<td></td>
<td>68476-86-8</td>
<td>30 - 40</td>
</tr>
<tr>
<td>2-methylpentane</td>
<td></td>
<td>107-83-5</td>
<td>20 - 30</td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated heavy naphthenic</td>
<td></td>
<td>64742-52-5</td>
<td>10 - 20</td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated light</td>
<td></td>
<td>64742-49-0</td>
<td>10 - 20</td>
</tr>
<tr>
<td>n-hexane</td>
<td></td>
<td>110-54-3</td>
<td>3 - 5</td>
</tr>
<tr>
<td>zinc oxide</td>
<td></td>
<td>1314-13-2</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>2,2-dimethylbutane</td>
<td></td>
<td>75-83-2</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>2,3-dimethylbutane</td>
<td></td>
<td>79-29-8</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>3-methylpentane</td>
<td></td>
<td>96-14-0</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>calcium bis(dinonylnaphthalenesulphonate)</td>
<td></td>
<td>57855-77-3</td>
<td>&lt; 0.3</td>
</tr>
</tbody>
</table>

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

Most important symptoms/effects, acute and delayed


Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
## 5. Fire-fighting measures

**Suitable extinguishing media**
- Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

**Unsuitable extinguishing media**
- Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
- Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
- Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**Fire-fighting equipment/instructions**
- In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

**General fire hazards**
- Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures
- Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Remove all possible sources of ignition in the surrounding area. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up
- Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

### Environmental precautions
- Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

### Precautions for safe handling
- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Protect containers from physical damage; do not drag, roll, slide, or drop. When moving containers, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport containers. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, see the product label.

### Conditions for safe storage, including any incompatibilities
- Level 3 Aerosol.
- Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated light (CAS 64742-49-0)</td>
<td>PEL</td>
<td>400 mg/m³</td>
<td></td>
</tr>
<tr>
<td>n-hexane (CAS 110-54-3)</td>
<td>PEL</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>zinc oxide (CAS 1314-13-2)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³</td>
<td>Fume.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2-dimethylbutane (CAS 75-83-2)</td>
<td>STEL</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>2,3-dimethylbutane (CAS 79-29-8)</td>
<td>TWA</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>2-methylpentane (CAS 107-83-5)</td>
<td>TWA</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>3-methylpentane (CAS 96-14-0)</td>
<td>STEL</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>n-hexane (CAS 110-54-3)</td>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>zinc oxide (CAS 1314-13-2)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

### US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2-dimethylbutane (CAS 75-83-2)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>510 ppm</td>
<td></td>
</tr>
<tr>
<td>2,3-dimethylbutane (CAS 79-29-8)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>510 ppm</td>
<td></td>
</tr>
<tr>
<td>2-methylpentane (CAS 107-83-5)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>510 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>350 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>510 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>350 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>Components</td>
<td>Value</td>
<td>Form</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>3-methylpentane (CAS 96-14-0)</td>
<td>1800 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>510 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>350 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td>1800 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEL</td>
<td>10 mg/m³ Mist.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>5 mg/m³ Mist.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated light (CAS 64742-49-0)</td>
<td>100 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>400 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n-hexane (CAS 110-54-3)</td>
<td>180 mg/m³ Dust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>zinc oxide (CAS 1314-13-2)</td>
<td>15 mg/m³ Dust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceiling</td>
<td>5 mg/m³ Fume.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEL</td>
<td>10 mg/m³ Fume.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>5 mg/m³ Fume.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Biological limit values**

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-hexane (CAS 110-54-3)</td>
<td>0.4 mg/l</td>
<td>2,5-Hexanedio n, without hydrolysis</td>
<td>Urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection**

Hand protection

Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC). Viton/butyl.

Other

Wear appropriate chemical resistant clothing.

**Respiratory protection**

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

**Physical state**

Liquid.
### 10. Stability and reactivity

**Reactivity**
The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability**
Material is stable under normal conditions.

**Possibility of hazardous reactions**
No dangerous reaction known under conditions of normal use.

**Conditions to avoid**
Heat, flames and sparks. Contact with incompatible materials.

**Incompatible materials**
Strong oxidizing agents.

**Hazardous decomposition products**
No hazardous decomposition products are known.

### 11. Toxicological information

**Information on likely routes of exposure**

**Inhalation**
May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.

**Skin contact**
Causes skin irritation.

**Eye contact**
Causes eye irritation.

**Ingestion**
Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Information on toxicological effects**

**Acute toxicity**
May be fatal if swallowed and enters airways.
### Test Results

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium bis(dinonylnaphthalenesulphonate) (CAS 57855-77-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 20 g/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated light (CAS 64742-49-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>n-hexane (CAS 110-54-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 1300 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>15840 mg/kg</td>
</tr>
<tr>
<td>zinc oxide (CAS 1314-13-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**
Causes skin irritation.

**Serious eye damage/eye irritation**
Causes eye irritation.

**Respiratory sensitization**
Not a respiratory sensitizer.

**Skin sensitization**
This product is not expected to cause skin sensitization.

**Germ cell mutagenicity**
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**
Not classifiable as to carcinogenicity to humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
Not listed.

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**
Not listed.

**Reproductive toxicity**
Suspected of damaging fertility.

**Specific target organ toxicity - single exposure**
May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure**
Not classified.

**Aspiration hazard**
May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

**Chronic effects**
Prolonged inhalation may be harmful.
12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-methylpentane (CAS 107-83-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish</td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout,donaldson trout (Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated light (CAS 64742-49-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish</td>
</tr>
<tr>
<td>n-hexane (CAS 110-54-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td>zinc oxide (CAS 1314-13-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout,donaldson trout (Oncorhynchus mykiss)</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Partition coefficient n-octanol / water (log Kow)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2-dimethylbutane</td>
<td>3.82</td>
</tr>
<tr>
<td>2,3-dimethylbutane</td>
<td>3.42</td>
</tr>
<tr>
<td>2-methylpentane</td>
<td>3.74</td>
</tr>
<tr>
<td>3-methylpentane</td>
<td>3.6</td>
</tr>
<tr>
<td>n-hexane</td>
<td>3.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioconcentration factor (BCF)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>naphtha (petroleum), hydrotreated light</td>
<td>10 - 25000</td>
</tr>
<tr>
<td>zinc oxide</td>
<td>60690</td>
</tr>
</tbody>
</table>

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products: If discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code: D001: Waste Flammable material with a flash point <140 F

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
# 14. Transport information

**DOT**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Aerosols, flammable, Limited Quantity</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Special provisions</td>
<td>N82</td>
</tr>
<tr>
<td>Packaging exceptions</td>
<td>306</td>
</tr>
<tr>
<td>Packaging non bulk</td>
<td>None</td>
</tr>
<tr>
<td>Packaging bulk</td>
<td>None</td>
</tr>
</tbody>
</table>

**IATA**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Aerosols, flammable, Limited Quantity</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>ERG Code</td>
<td>10L</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Passenger and cargo aircraft</td>
<td>Allowed with restrictions.</td>
</tr>
<tr>
<td>Cargo aircraft only</td>
<td>Allowed with restrictions.</td>
</tr>
</tbody>
</table>

**IMDG**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>AEROSOLS, LIMITED QUANTITY</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2</td>
</tr>
<tr>
<td>Class</td>
<td>2</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No.</td>
</tr>
<tr>
<td>EmS</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Passenger and cargo aircraft</td>
<td>Allowed with restrictions.</td>
</tr>
<tr>
<td>Cargo aircraft only</td>
<td>Allowed with restrictions.</td>
</tr>
</tbody>
</table>

# 15. Regulatory information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated.
- SARA 304 Emergency release notification
  Not regulated.
  Not regulated.
- US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
  - n-hexane (CAS 110-54-3)
  - zinc oxide (CAS 1314-13-2)
- CERCLA Hazardous Substance List (40 CFR 302.4)
  - n-hexane (CAS 110-54-3) Listed.
  - zinc oxide (CAS 1314-13-2) Listed.
- CERCLA Hazardous Substances: Reportable quantity
  - n-hexane (CAS 110-54-3) 5000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
n-hexane (CAS 110-54-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

Food and Drug Administration (FDA)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Section 311/312
Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
No

US state regulations
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)
liquefied petroleum gas (CAS 68476-86-8)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)

US. New Jersey Worker and Community Right-to-Know Act
2,2-dimethylbutane (CAS 75-83-2)
2,3-dimethylbutane (CAS 79-29-8)
2-methylpentane (CAS 107-83-5)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)
zinc oxide (CAS 1314-13-2)

US. Massachusetts RTK - Substance List
2,2-dimethylbutane (CAS 75-83-2)
2,3-dimethylbutane (CAS 79-29-8)
2-methylpentane (CAS 107-83-5)
3-methylpentane (CAS 96-14-0)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)
zinc oxide (CAS 1314-13-2)

US. Pennsylvania Worker and Community Right-to-Know Law
2,2-dimethylbutane (CAS 75-83-2)
2,3-dimethylbutane (CAS 79-29-8)
2-methylpentane (CAS 107-83-5)
3-methylpentane (CAS 96-14-0)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)
zinc oxide (CAS 1314-13-2)

US. Rhode Island RTK
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
titanium dioxide (CAS 13463-67-7) Listed: September 2, 2011

Volatile organic compounds (VOC) regulations
EPA
VOC content (40 CFR 51.100(s))
100 %
Consumer products (40 CFR 59, Subpt. C) Not regulated
State
Consumer products Not regulated (semi-solid lubricant)
VOC content (CA) 84.7 %
VOC content (OTC) 84.7 %

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 01-16-2015
Revision date 10-06-2017
Prepared by Allison Yoon
Version # 03
Further information CRC # 568F-G/1002591-1002592

HMIS® ratings
Health: 2*
Flammability: 4
Physical hazard: 0
Personal protection: B

NFPA ratings
Health: 2
Flammability: 4
Instability: 0

Disclaimer
The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision Information
Product and Company Identification: Product Codes
Physical & Chemical Properties: Multiple Properties
Transport Information: Agency Name, Packaging Type, and Transport Mode Selection
Other information, including date of preparation or last revision: Further information
1. Identification

**Product Name:** SPECLT SSPR 6PK HIHEAT ULTRA BLACK 12OZ

**Revision Date:** 1/10/2018

**Product Identifier:** 241169

**Supercedes Date:** 5/8/2017

**Product Use/Class:** High Heat Coating/Aerosol

**Supplier:** Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL  60061
USA

**Preparer:** Regulatory Department

**Manufacturer:** Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL  60061
USA

**Emergency Telephone:** 24 Hour Hotline: 847-367-7700

2. Hazard Identification

**Classification**

**Symbol(s) of Product**

- (Fire)
- (Explosion)
- (Toxicity)
- (Irritation)

**Signal Word**

Danger

**Possible Hazards**

30% of the mixture consists of ingredient(s) of unknown acute toxicity.

**GHS HAZARD STATEMENTS**

- **Carcinogenicity, category 2**  
  H351  
  Suspected of causing cancer.

- **Compressed Gas**  
  H280  
  Contains gas under pressure; may explode if heated.

- **Eye Irritation, category 2**  
  H319  
  Causes serious eye irritation.

- **Flammable Aerosol, category 1**  
  H222  
  Extremely flammable aerosol.

- **Reproductive Toxicity, category 2**  
  H361  
  Suspected of damaging fertility or the unborn child.

- **STOT, repeated exposure, category 2**  
  H373  
  May cause damage to organs through prolonged or repeated exposure.

- **STOT, single exposure, category 3, NE**  
  H336  
  May cause drowsiness or dizziness.
Skin Irritation, category 2

GHS LABEL PRECAUTIONARY STATEMENTS

P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P321 For specific treatment see label

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
3. Composition / Information On Ingredients

HAZARDOUS SUBSTANCES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Wt.% Range</th>
<th>GHS Symbols</th>
<th>GHS Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>25-50</td>
<td>GHS02-GHS07</td>
<td>H225-319-332-336</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>10-25</td>
<td>GHS04</td>
<td>H280</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
<td>2.5-10</td>
<td>GHS02-GHS07</td>
<td>H226-315-319-332</td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td>2.5-10</td>
<td>GHS04</td>
<td>H280</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
<td>2.5-10</td>
<td>GHS02-GHS07</td>
<td>H225-319-332-336</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>1.0-2.5</td>
<td>GHS02-GHS07-GHS08</td>
<td>H225-304-332-351-373</td>
</tr>
<tr>
<td>Copper Chromite Black Spinel</td>
<td>68186-91-4</td>
<td>1.0-2.5</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>0.1-1.0</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures
7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only in a well-ventilated area. Use only with adequate ventilation. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120 ° F. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight % Less Than</th>
<th>ACGIH TLV-TWA</th>
<th>ACGIH TLV- STEL</th>
<th>OSHA PEL-TWA</th>
<th>OSHA PEL- CEILING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>35.0</td>
<td>250 ppm</td>
<td>500 ppm</td>
<td>1000 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>20.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>1000 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Toluene (o-, m-, p-isomers)</td>
<td>108-88-3</td>
<td>15.0</td>
<td>20 ppm</td>
<td>N.E.</td>
<td>200 ppm</td>
<td>300 ppm</td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td>10.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>1000 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
<td>5.0</td>
<td>200 ppm</td>
<td>300 ppm</td>
<td>200 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>5.0</td>
<td>20 ppm</td>
<td>N.E.</td>
<td>100 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Copper Chromite Black Spinel</td>
<td>68186-91-4</td>
<td>5.0</td>
<td>20 ppm</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>1.0</td>
<td>3 mg/m3</td>
<td>N.E.</td>
<td>3.5 mg/m3</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information
9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Aerosolized Mist</td>
</tr>
<tr>
<td>Odor</td>
<td>Solvent Like</td>
</tr>
<tr>
<td>Relative Density, g/cm³</td>
<td>0.746</td>
</tr>
<tr>
<td>Freeze Point, °C</td>
<td>N.D.</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Slight</td>
</tr>
<tr>
<td>Decomposition Temp., °C</td>
<td>N.D.</td>
</tr>
<tr>
<td>Boiling Range, °C</td>
<td>-37 - 537</td>
</tr>
<tr>
<td>Flammability</td>
<td>Supports Combustion</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Faster than Ether</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Heavier than Air</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N.E.</td>
</tr>
<tr>
<td>pH</td>
<td>N.E.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N.D.</td>
</tr>
<tr>
<td>Partition Coefficient, n-octanol/water</td>
<td>N.D.</td>
</tr>
<tr>
<td>Explosive Limits, vol%</td>
<td>1.0 - 13.0</td>
</tr>
<tr>
<td>Flash Point, °C</td>
<td>-96</td>
</tr>
<tr>
<td>Auto-ignition Temp., °C</td>
<td>N.D.</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N.D.</td>
</tr>
</tbody>
</table>

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

 CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition.

 INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

 HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

 HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

 STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

 EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

 EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. May be absorbed through the skin in harmful amounts. May cause skin irritation. Allergic reactions are possible. Prolonged or repeated contact may cause skin irritation.

 EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

 EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

 EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to > 1000ppm during gestation. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

 Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

 PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

 ACUTE TOXICITY VALUES

 The acute effects of this product have not been tested. Data on individual components are tabulated below:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Vapor LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>5800 mg/kg Rat</td>
<td>&gt;15700 mg/kg Rabbit</td>
<td>50.1 mg/L Rat</td>
</tr>
</tbody>
</table>
12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Do not incinerate closed containers. Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems. This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

<table>
<thead>
<tr>
<th>Domestic (USDOT)</th>
<th>International (IMDG)</th>
<th>Air (IATA)</th>
<th>TDG (Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number:</td>
<td>N.A.</td>
<td>1950</td>
<td>1950</td>
</tr>
<tr>
<td>Proper Shipping Name:</td>
<td>Paint Products in Limited Quantities</td>
<td>Aerosols</td>
<td>Aerosols</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>N.A.</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Limited Quantity:</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

No Information

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone</td>
<td>78-93-3</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
</tr>
<tr>
<td>Copper Chromite Black Spinel</td>
<td>68186-91-4</td>
</tr>
</tbody>
</table>

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:
No TSCA 12(b) components exist in this product.

16. Other Information

HMIS RATINGS
Health: 2° Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA RATINGS
Health: 2 Flammability: 4 Instability 0

VOLATILE ORGANIC COMPOUNDS, g/L: 598

SDS REVISION DATE: 1/10/2018

REASON FOR REVISION: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
11 - Toxicological Information
15 - Regulatory Information
Substance Chemical Name Changed
Substance Hazard Threshold % Changed
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.
Material Safety Data Sheet
Smooth-Sil 930, Smooth-Sil 935, Smooth-Sil 940  MSDS No. 810
Date Of Preparation: March 22, 2013  Revision: 0006

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Smooth-Sil 930 Part A
Smooth-Sil 935 Part A
Smooth-Sil 940 Part A

General Use: Silicone Elastomer

Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042
Phone (610) 252-5800, FAX (610) 252-6200

Emergency Contact: Chem-Tel
Domestic  800-255-3924
International  813-248-0585

Section 2 - Hazards Identification


Section 3 - Composition / Information on Ingredients

No hazardous ingredients

Section 4 - First Aid Measures

Inhalation: Remove source(s) of contamination and move victim to fresh air.
Eye Contact: Flush eyes with plenty of water. If irritation persists, seek medical attention.
Skin Contact: In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse.
Ingestion: Do not induce vomiting unless instructed by a physician. Contact physician immediately

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

Flash Point: >300 °F
Flash Point Method: PMCC
LEL: Not Established
UEL: Not Established
Flammability Classification: Non-Flammable
Extinguishing Media: Dry Chemical, Carbon Dioxide, and Foam
Unusual Fire or Explosion Hazards: None

Fire-Fighting Instructions: Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.
Section 6 - Accidental Release Measures

Spill /Leak Procedures: Dike and contain spill; absorb or scrape up excess into suitable container for disposal. Stop or reduce discharge if it can be done safely.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Use good general housekeeping procedures.
Storage Requirements: Store in cool dry, well-ventilated area.

Section 8 - Exposure Controls / Personal Protection

Respiratory Protection: Follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

| Physical State: | Viscous Liquid |
| Appearance: | Off White viscous liquid |
| Odor: | Sweet odor |
| Vapor Pressure: | None (Polymeric Resin) |
| Vapor Density (Air=1): | >1 |
| Specific Gravity (H₂O=1, at 4 °C): | 1.18 |
| Water Solubility: | Insoluble |
| Boiling Point: | None (Polymeric Resin) |
| % Volatile: | Nil |
| Freezing/Melting Point: | None (Polymeric Resin) |
| Viscosity: | 1000 poise |
| Evaporation Rate: | Not Applicable |

Section 10 - Stability and Reactivity

Stability: These products are stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization can not occur.
Chemical Incompatibilities: Strong bases, and acids.
Hazardous Decomposition Products: Silica, carbon monoxide and carbon dioxide.
Section 11 - Toxicological Information

Eye Effects: Irritation
Skin Effects: Irritation
Carcinogenicity: None Determined
Mutagenicity: None Determined
Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: Must be disposed of in accordance with applicable Federal, state and local regulations.

Section 14 - Transport Information

DOT: Not Regulated
IATA: Not Regulated
IMDG: Not Regulated

Section 15 - Regulatory Information

United States Regulations

EPA Regulations:
RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
SARA Toxic Chemical (40 CFR 372.65): None
These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

TSCA Inventory Status (40 CFR710): All components of these formulations are listed in the TSCA Inventory.
California Proposition 65: These products do not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

CANADA Regulations

WHMIS Identification: Not controlled
CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): All are Listed

Labeling according to EEC Directive

No special packaging or labeling requirements.
**Disclaimer:** The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

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**Section 1 - Chemical Product and Company Identification**

| Product/Chemical Name: | Smooth-Sil 930 Part B  
|                                         | Smooth-Sil 935 Part B  
|                                         | Smooth-Sil 940 Part B |

**General Use:** Silicone Elastomer

**Manufacturer:** Smooth-On Inc., 2000 St. John St., Easton PA 18042  
Phone (610) 252-5800, FAX (610) 252-6200

**Emergency Contact:** Chem-Tel  
Domestic 800-255-3924  
International 813-248-0585

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**Section 2 - Hazards Identification**


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**Section 3 - Composition / Information on Ingredients**

No hazardous ingredients

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**Section 4 - First Aid Measures**

**Inhalation:** Remove source(s) of contamination and move victim to fresh air.

**Eye Contact:** Flush eyes with plenty of water. If irritation persists, seek medical attention.

**Skin Contact:** In case of skin contact, wash thoroughly with soap and water; remove contaminated clothing and launder before reuse.

**Ingestion:** Do not induce vomiting unless instructed by a physician. Contact physician immediately.  
*After first aid, get appropriate in-plant, paramedic, or community medical support.*

---

**Section 5 - Fire-Fighting Measures**

**Flash Point:** >300 °F

**Flash Point Method:** PMCC

**LEL:** Not Established

**UEL:** Not Established

**Flammability Classification:** Non-Flammable

**Extinguishing Media:** Dry Chemical, Carbon Dioxide, and Foam

**Unusual Fire or Explosion Hazards:** None

**Fire-Fighting Instructions:** Fire fighters should wear self-contained breathing apparatus. Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.
Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** Dike and contain spill; absorb or scrape up excess into suitable container for disposal. Stop or reduce discharge if it can be done safely.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

**Handling Precautions:** Use good general housekeeping procedures.

**Storage Requirements:** Store in cool dry, well-ventilated area.

Section 8 - Exposure Controls / Personal Protection

**Respiratory Protection:** Follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators.

**Protective Clothing/Equipment:** Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:**
- Smooth-Sil 930: Blue liquid
- Smooth-Sil 935: Blue liquid
- Smooth-Sil 940: Green liquid

**Odor:** Sweet odor

**Vapor Pressure:** None (Polymeric Resin)

**Vapor Density (Air=1):** >1

**Specific Gravity (H2O=1, at 4 °C):** 1.0

**Water Solubility:** Insoluble

**Boiling Point:** None (Polymeric Resin)

**% Volatile:** Nil

**Freezing/Melting Point:** None (Polymeric Resin)

**Viscosity:** 0.5 poise

**Evaporation Rate:** Not Applicable

Section 10 - Stability and Reactivity

**Stability:** These products are stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization can not occur.

**Chemical Incompatibilities:** Strong bases, and acids.

**Hazardous Decomposition Products:** Silica, carbon monoxide and carbon dioxide
Section 11- Toxicological Information

Eye Effects: Irritation
Skin Effects: Irritation

Carcinogenicity: None Determined
Mutagenicity: None Determined
Teratogenicity: None Determined

Section 12 - Ecological Information

None Established

Section 13 - Disposal Considerations

Disposal: Must be disposed of in accordance with applicable Federal, state and local regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>DOT</th>
<th>IATA</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Regulated</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

United States Regulations

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

SARA Toxic Chemical (40 CFR 372.65): None

These products do not contain chemicals that are subject to release reporting requirements under section 313 of SARA Title III.

TSCA Inventory Status (40 CFR710): All components of these formulations are listed in the TSCA Inventory.

California Proposition 65: These products do not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

CANADA Regulations

WHMIS Identification: Not controlled
CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): All are Listed

Labeling according to EEC Directive

No special packaging or labeling requirements.
### Section 16 - Other Information

**Disclaimer:** The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

1. Identification

Product Name: PTOUCH 2X +SSPR 6PK GLOSS CLEAR
Revision Date: 10/30/2017

Product Identifier: 249117
Supercedes Date: 5/5/2017

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product

![Symbol Image]

Signal Word
Danger

Possible Hazards
25% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS
Flammable Aerosol, category 1 H222 Extremely flammable aerosol.

Compressed Gas H280 Contains gas under pressure; may explode if heated.

Carcinogenicity, category 2 H351 Suspected of causing cancer.

STOT, single exposure, category 3, NE H336 May cause drowsiness or dizziness.

Eye Irritation, category 2 H319 Causes serious eye irritation.

GHS LABEL PRECAUTIONARY STATEMENTS
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211  Do not spray on an open flame or other ignition source.

P251  Do not pierce or burn, even after use.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

P201  Obtain special instructions before use.

P280  Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405  Store locked up.

P501  Dispose of contents/container in accordance with local, regional and national regulations.

P261  Avoid breathing dust/fume/gas/mist/vapors/spray.

P271  Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312  Call a POISON CENTER or doctor/physician if you feel unwell.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P264  Wash hands thoroughly after handling.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

3. Composition / Information On Ingredients

<table>
<thead>
<tr>
<th>HAZARDOUS SUBSTANCES</th>
<th>CAS-No.</th>
<th>Wt. % Range</th>
<th>GHS Symbols</th>
<th>GHS Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>25-50</td>
<td>GHS02-GHS07</td>
<td>H225-319-332-336</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>123-86-4</td>
<td>10-25</td>
<td>GHS02-GHS07</td>
<td>H226-336</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>10-25</td>
<td>GHS04</td>
<td>H280</td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td>2.5-10</td>
<td>GHS04</td>
<td>H280</td>
</tr>
<tr>
<td>1-Methoxy-2-Propyl Acetate</td>
<td>108-65-6</td>
<td>2.5-10</td>
<td>GHS02</td>
<td>H226</td>
</tr>
</tbody>
</table>
4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 °F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight % Less Than</th>
<th>ACGIH TLV-TWA</th>
<th>ACGIH TLV- STEL</th>
<th>OSHA PEL-TWA</th>
<th>OSHA PEL-CEILING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>35.0</td>
<td>250 ppm</td>
<td>500 ppm</td>
<td>1000 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>n-Butyl Acetate</td>
<td>123-88-4</td>
<td>25.0</td>
<td>50 ppm</td>
<td>150 ppm</td>
<td>150 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>20.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>1000 ppm</td>
<td>N.E.</td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td>10.0</td>
<td>N.E.</td>
<td>1000 ppm</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>1-Methoxy-2-Propyl Acetate</td>
<td>108-85-6</td>
<td>10.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>
PERSONAL PROTECTION

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Aerosolized Mist</td>
</tr>
<tr>
<td>Odor</td>
<td>Solvent Like</td>
</tr>
<tr>
<td>Relative Density</td>
<td>0.751</td>
</tr>
<tr>
<td>Freeze Point, °C</td>
<td>N.D.</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Slight</td>
</tr>
<tr>
<td>Decomposition Temp., °C</td>
<td>N.D.</td>
</tr>
<tr>
<td>Boiling Range, °C</td>
<td>-37 - 375</td>
</tr>
<tr>
<td>Flammability</td>
<td>Supports Combustion</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Faster than Ether</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Heavier than Air</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N.E.</td>
</tr>
<tr>
<td>pH</td>
<td>N.A.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N.D.</td>
</tr>
<tr>
<td>Partition Coefficient, n-octanol/water</td>
<td>N.D.</td>
</tr>
<tr>
<td>Explosive Limits, vol%</td>
<td>1.0 - 13.0</td>
</tr>
<tr>
<td>Flash Point, °C</td>
<td>-96</td>
</tr>
<tr>
<td>Auto-ignition Temp., °C</td>
<td>N.D.</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N.D.</td>
</tr>
</tbody>
</table>

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalis.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.
PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES
The acute effects of this product have not been tested. Data on individual components are tabulated below:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Vapor LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>5800 mg/kg Rat</td>
<td>&gt;15700 mg/kg Rabbit</td>
<td>50.1 mg/L Rat</td>
</tr>
<tr>
<td>123-86-4</td>
<td>n-Butyl Acetate</td>
<td>10768 mg/kg Rat</td>
<td>&gt;17600 mg/kg Rabbit</td>
<td>&gt; 21 mg/L Rat</td>
</tr>
<tr>
<td>74-98-6</td>
<td>Propane</td>
<td>N.I.</td>
<td>N.I.</td>
<td>658 mg/L Rat</td>
</tr>
<tr>
<td>106-97-8</td>
<td>n-Butane</td>
<td>N.I.</td>
<td>N.I.</td>
<td>658 mg/L Rat</td>
</tr>
<tr>
<td>108-65-6</td>
<td>1-Methoxy-2-Propyl Acetate</td>
<td>8532 mg/kg Rat</td>
<td>&gt;5000 mg/kg Rabbit</td>
<td>N.I.</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>3500 mg/kg Rat</td>
<td>&gt;4350 mg/kg Rabbit</td>
<td>29.08 mg/L Rat</td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene</td>
<td>3500 mg/kg Rat</td>
<td>15400 mg/kg Rabbit</td>
<td>17.4 mg/L Rat</td>
</tr>
</tbody>
</table>

N.I. - No Information

12. Ecological Information
ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information
DISPOSAL INFORMATION: No Information

14. Transport Information

<table>
<thead>
<tr>
<th>UN Number:</th>
<th>Domestic (USDOT)</th>
<th>International (IMDG)</th>
<th>Air (IATA)</th>
<th>TDG (Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N.A.</td>
<td>1950</td>
<td>1950</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Proper Shipping Name: Paint Products in Limited Quantities

Hazard Class: N.A. 2.1 2.1 N.A.

Packing Group: N.A. N.A. N.A. N.A.

Limited Quantity: Yes Yes Yes Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category
This product has been reviewed according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

No Information

Sara Section 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>1330-20-7</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
</tr>
</tbody>
</table>

Toxic Substances Control Act:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:
No TSCA 12(b) components exist in this product.

## 16. Other Information

### HMIS RATINGS
<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2*</td>
<td>4</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

### NFPA RATINGS
<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

### VOLATILE ORGANIC COMPOUNDS, g/L:
606

### SDS REVISION DATE:
10/30/2017

### REASON FOR REVISION:
- Substance and/or Product Properties Changed in Section(s):
  - 11 - Toxicological Information
  - 15 - Regulatory Information
  - Product Composition Changed
  - Substance Hazard Threshold % Changed
  - Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.
Section 1. Identification

Product name : MR™309 Paintable Release Agent Aerosol
Product code : S00309
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Sprayon Products
Cleveland, OH  44115

Emergency telephone number of the company : (216) 566-2917
Product Information Telephone Number : (800)247-3266
Regulatory Information Telephone Number : (216)566-2902
Transportation Emergency Telephone Number : (800)424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 67.9%

GHS label elements

Hazard pictograms :

Signal word : Danger
Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist.
Section 2. Hazards identification

**Response:** Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

**Storage:** Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

**Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements:** DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

**Hazards not otherwise classified:** None known.

Section 3. Composition/information on ingredients

**Substance/mixture:** Mixture

**Other means of identification:** Not available.

**CAS number/other identifiers**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% by weight</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-Difluoroethane</td>
<td>57.9</td>
<td>75-37-6</td>
</tr>
<tr>
<td>Heptane</td>
<td>8.8</td>
<td>64742-49-0</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**Occupational exposure limits, if available, are listed in Section 8.**

Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Section 4. First aid measures

**Ingestion**: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: Can cause central nervous system (CNS) depression.

**Over-exposure signs/symptoms**

- **Eye contact**: Adverse symptoms may include the following:
  - irritation
  - redness
- **Inhalation**: Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness
- **Skin contact**: No specific data.
- **Ingestion**: No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

- **Notes to physician**: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- **Specific treatments**: No specific treatment.
- **Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.
**Section 5. Fire-fighting measures**

<table>
<thead>
<tr>
<th>Specific hazards arising from the chemical</th>
<th>Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous thermal decomposition products</td>
<td>Decomposition products may include the following materials: carbon dioxide, carbon monoxide, halogenated compounds, carbonyl halides</td>
</tr>
<tr>
<td>Special protective actions for fire-fighters</td>
<td>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.</td>
</tr>
<tr>
<td>Special protective equipment for fire-fighters</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

**Section 6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| Environmental precautions | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

**Methods and materials for containment and cleaning up**

| Small spill | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

**Date of issue/Date of revision**: 3/13/2015. **Date of previous issue**: No previous validation. **Version**: 1.
Section 7. Handling and storage

Precautions for safe handling

Advice on general occupational hygiene:
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:
Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Protective measures:
Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-Difluoroethane</td>
<td>AIHA WEEL (United States, 10/2011). TWA: 1000 ppm 8 hours.</td>
</tr>
</tbody>
</table>

Appropriate engineering controls:
Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls:
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection
Section 8. Exposure controls/personal protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid.
Color: Not available.
Odor: Not available.
Odor threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: Not available.
Flash point: Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
Evaporation rate: 4.5 (butyl acetate = 1)
Flammability (solid, gas): Not available.
Lower and upper explosive (flammable) limits: Lower: 1%
Vapor pressure: 13.5 kPa (101.325 mm Hg) [at 20°C]
Vapor density: 1.617 [Air = 1]
Relative density: 0.78
Solubility: Not available.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product
Type of aerosol: Spray
Heat of combustion: 0.00001594 kJ/g

Date of issue/Date of revision: 3/13/2015. Date of previous issue: No previous validation. Version: 1
Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity
Not available.

Irritation/Corrosion
Not available.

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-Difluoroethane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Heptane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-Difluoroethane</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Heptane</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Aspiration hazard

Date of issue/Date of revision : 3/13/2015. Date of previous issue : No previous validation. Version : 1 7/11
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heptane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure

**Potential acute health effects**

- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: Can cause central nervous system (CNS) depression.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Eye contact**: Adverse symptoms may include the following:
  - irritation
  - redness
- **Inhalation**: Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness
- **Skin contact**: No specific data.
- **Ingestion**: No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

- **Short term exposure**
  - **Potential immediate effects**: Not available.
  - **Potential delayed effects**: Not available.
- **Long term exposure**
  - **Potential immediate effects**: Not available.
  - **Potential delayed effects**: Not available.

**Potential chronic health effects**

Not available.

- **General**: May cause damage to organs through prolonged or repeated exposure.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

**Date of issue/Date of revision**: 3/13/2015.
**Date of previous issue**: No previous validation.
**Version**: 1

Distributed by Freeman Manufacturing & Supply Co. www.freemansupply.com 800-321-8511
Section 12. Ecological information

Toxicity
Not available.

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heptane</td>
<td>-</td>
<td>10 to 2500</td>
<td>high</td>
</tr>
</tbody>
</table>

Mobility in soil

| Soil/water partition coefficient (K_{oc}) | : Not available. |

Other adverse effects
No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>IATA Classification</th>
<th>IMDG Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1950</td>
<td>UN1950</td>
<td>UN1950</td>
<td>UN1950</td>
<td>UN1950</td>
<td>UN1950</td>
</tr>
<tr>
<td>AEROSOLS</td>
<td>AEROSOLS</td>
<td>AEROSOLS</td>
<td>AEROSOLS, flammable</td>
<td>AEROSOLS</td>
<td>AEROSOLS</td>
</tr>
</tbody>
</table>

Transport hazard class(es)

| 2.1      | 2.1 | 2.1 | 2.1 | 2.1 |

Packing group

| -        | -   | -   | -   | -   |

Environmental hazards


Date of issue/Date of revision: 3/13/2015. Date of previous issue: No previous validation. Version: 1.
Section 14. Transport information

<table>
<thead>
<tr>
<th>Additional information</th>
<th>Special provisions</th>
<th>Special provisions</th>
<th>Special provisions</th>
<th>Emergency schedules (EmS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIMITED QUANTITY</td>
<td>LIMITED QUANTITY</td>
<td>LIMITED QUANTITY</td>
<td>LIMITED QUANTITY, F-D, S-U</td>
</tr>
</tbody>
</table>

Special precautions for user: Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

Section 15. Regulatory information

U.S. Federal regulations:
State regulations
California Prop. 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>2</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>0</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue/Date of revision: 3/13/2015. Date of previous issue: No previous validation. Version: 1 10/11
Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.
Material Safety Data Sheet

Section 1 - Chemical Product / Company Information

Product Name: Touch N Tone Aerosol Topcoats
Identification Number: 55280830, 55270830, 55271830, 55272830, 55278830, 55281830, 55285830, 55276830
Product Use/Class: Topcoats/Aerosol
Supplier: Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer: Regulatory Department

Revision Date: 10/17/2006

Section 2 - Composition / Information On Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight % Less Than ACGIH TLV-TWA</th>
<th>ACGIH TLV-STEL</th>
<th>OSHA PEL-TWA</th>
<th>OSHA PEL-CEILING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>45.0</td>
<td>500 PPM</td>
<td>750 PPM</td>
<td>750 PPM</td>
</tr>
<tr>
<td>Liquefied Petroleum Gas</td>
<td>64746-86-8</td>
<td>35.0</td>
<td>1000 PPM</td>
<td>N.E.</td>
<td>1000 PPM</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>10.0</td>
<td>100 PPM</td>
<td>150 PPM</td>
<td>100 PPM</td>
</tr>
<tr>
<td>Magnesium Silicate</td>
<td>14807-96-6</td>
<td>10.0</td>
<td>10 mg/m3</td>
<td>N.E.</td>
<td>15 mg/m3</td>
</tr>
<tr>
<td>Naphtha</td>
<td>8032-32-4</td>
<td>10.0</td>
<td>300 PPM</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>10.0</td>
<td>10 mg/m3</td>
<td>N.E.</td>
<td>10 mg/m3</td>
</tr>
<tr>
<td>Aliphatic Petroleum Distillates</td>
<td>64742-48-9</td>
<td>5.0</td>
<td>400 PPM</td>
<td>N.E.</td>
<td>400 PPM</td>
</tr>
<tr>
<td>Aromatic Solvent</td>
<td>64742-95-6</td>
<td>5.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>5.0</td>
<td>50 PPM</td>
<td>150 PPM</td>
<td>200 PPM</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>5.0</td>
<td>100 PPM</td>
<td>125 PPM</td>
<td>100 PPM</td>
</tr>
<tr>
<td>Aliphatic Hydrocarbon</td>
<td>64742-89-8</td>
<td>5.0</td>
<td>300 PPM</td>
<td>N.E.</td>
<td>300 PPM</td>
</tr>
<tr>
<td>Aromatic Hydrocarbon</td>
<td>64742-95-6</td>
<td>5.0</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>95-63-6</td>
<td>5.0</td>
<td>25 PPM</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Aromatic Petroleum Distillates</td>
<td>64742-94-5</td>
<td>5.0</td>
<td>10 PPM</td>
<td>N.E.</td>
<td>10 PPM</td>
</tr>
<tr>
<td>Pigment Red 122</td>
<td>980-26-7</td>
<td>0.1</td>
<td>15 mg/m3</td>
<td>N.E.</td>
<td>5 mg/m3</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled.
Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F LOWER EXPLOSIVE LIMIT: 0.7 %
(Setaflash) UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage
Handling: Wash hands before eating. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range: -34 - 999 F  
Odor: Solvent Like  
Appearance: Liquid  
Solubility in H2O: Slight  
Freeze Point: ND  
Vapor Pressure:  
Physical State: Liquid  
Vapor Density:  
Odor Threshold: ND  
Evaporation Rate: Faster than Ether  
Specific Gravity: 0.7330  
PH: NE  

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalis.
Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

**Section 11 - Toxicological Information**

Product LD50: ND
Product LC50: ND

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Liquefied Petroleum Gas</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Xylene</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Magnesium Silicate</td>
<td>N.D.</td>
<td>TCLo: 11 mg/m3 inh.</td>
</tr>
<tr>
<td>Naphtha</td>
<td>&gt;5000 mg/kg (ORAL, RAT)</td>
<td>N.D.</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>&gt;7500 mg/kg (ORAL, RAT)</td>
<td>N.D.</td>
</tr>
<tr>
<td>Aliphatic Petroleum Distillates</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Aromatic Solvent</td>
<td>4700 mg/kg (ORAL, RAT)</td>
<td>3670 mg/kg (INH, RAT)</td>
</tr>
<tr>
<td>Toluene</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>3500 mg/kg (ORAL, RAT)</td>
<td>N.D.</td>
</tr>
<tr>
<td>Aliphatic Hydrocarbon</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>Aromatic Hydrocarbon</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>N.D.</td>
<td>18000 mg/m3 (RAT, 4 HR)</td>
</tr>
<tr>
<td>Aromatic Petroleum Distillates</td>
<td>4900 mg/kg (ORAL, RAT)</td>
<td>N.D.</td>
</tr>
<tr>
<td>Pigment Red 122</td>
<td>N.D.</td>
<td>N.D.</td>
</tr>
</tbody>
</table>

**Section 12 - Ecological Information**

Ecological Information: Product is a mixture of listed components.

**Section 13 - Disposal Information**

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

**Section 14 - Transportation Information**

DOT Proper Shipping Name: Aerosol
DOT Technical Name: ---
DOT Hazard Class: 2.1
DOT UN/NA Number: UN1950

<table>
<thead>
<tr>
<th>Packing Group</th>
<th>---</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Subclass</td>
<td>---</td>
</tr>
<tr>
<td>Resp. Guide Page</td>
<td>126</td>
</tr>
</tbody>
</table>

**Section 15 - Regulatory Information**

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and
312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

**SARA Section 313:**

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>95-63-6</td>
</tr>
<tr>
<td>Aromatic Petroleum Distillates</td>
<td>64742-94-5</td>
</tr>
</tbody>
</table>

**Toxic Substances Control Act:**

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

**U.S. State Regulations: As follows -**

**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Alkyd</td>
<td>PROPRIETARY</td>
</tr>
</tbody>
</table>

**Pennsylvania Right-to-Know:**

The following non-hazardous ingredients are present in the product at greater than 3%.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Alkyd</td>
<td>PROPRIETARY</td>
</tr>
<tr>
<td>Barium Sulfate</td>
<td>7727-43-7</td>
</tr>
</tbody>
</table>

**California Proposition 65:**

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

**International Regulations: As follows -**

**CANADIAN WHMIS:**

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.
CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:
Health: 2  Flammability: 4  Reactivity: 0  Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: N.A.

REASON FOR REVISION:

Legend:  N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.
SAFETY DATA SHEET
DAP1692

Section 1. Identification

<table>
<thead>
<tr>
<th>Product name</th>
<th>DUPLI-COLOR® Sandable Primer Gray Hot Rod</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>DAP1692</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not available.</td>
</tr>
<tr>
<td>Product type</td>
<td>Aerosol.</td>
</tr>
</tbody>
</table>

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Dupli-Color Products Company
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3270

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 50.4%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 85.4%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 70.9%

GHS label elements

Hazard pictograms :

Signal word : Danger
Section 2. Hazards identification

**Hazard statements**: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. (lungs)

**Precautionary statements**

**General**: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention**: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.

**Response**: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. DO NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage**: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

**Disposal**: Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements**: DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

**Hazards not otherwise classified**: DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

**Substance/mixture**: Mixture

**Other means of identification**: Not available.

**CAS number/other identifiers**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% by weight</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>≥25 - ≤50</td>
<td>67-64-1</td>
</tr>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>≥10 - ≤25</td>
<td>64742-89-8</td>
</tr>
<tr>
<td>Propane</td>
<td>≥10 - ≤25</td>
<td>74-98-6</td>
</tr>
<tr>
<td>Butane</td>
<td>≥10 - ≤25</td>
<td>106-97-8</td>
</tr>
<tr>
<td>Talc</td>
<td>≤10</td>
<td>14807-96-6</td>
</tr>
<tr>
<td>Light Aliphatic Hydrocarbon</td>
<td>≤5</td>
<td>64742-88-7</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>≤3</td>
<td>13463-67-7</td>
</tr>
<tr>
<td>Mineral Spirits 140-Flash</td>
<td>≤3</td>
<td>64742-88-7</td>
</tr>
</tbody>
</table>

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>&lt;1</td>
<td>1330-20-7</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>≤0.3</td>
<td>25013-15-4</td>
</tr>
<tr>
<td>Methyl Ethyl Ketoxime</td>
<td>≤0.3</td>
<td>96-29-7</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Causes serious eye irritation.

Inhalation: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact: May cause an allergic skin reaction.

Ingestion: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

- pain or irritation
- watering
- redness
Section 4. First aid measures

Protection of first-aiders:
No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician:
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments:
No specific treatment.

Indication of immediate medical attention and special treatment needed, if necessary

Skin contact:
Adverse symptoms may include the following:
irritation
redness

Ingestion:
Adverse symptoms may include the following:
nausea or vomiting

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media
Suitable extinguishing media:
Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:
None known.

Specific hazards arising from the chemical:
Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products:
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters:
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2016). TWA: 250 ppm 10 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 590 mg/m³ 10 hours.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016). TWA: 1000 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 2400 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>None.</td>
</tr>
<tr>
<td>Propane</td>
<td>NIOSH REL (United States, 10/2016). TWA: 1000 ppm 10 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 1800 mg/m³ 10 hours.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016). TWA: 1000 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 1800 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2017). Oxygen Depletion [Asphyxiant].</td>
</tr>
<tr>
<td>Butane</td>
<td>NIOSH REL (United States, 10/2016). TWA: 800 ppm 10 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 1900 mg/m³ 10 hours.</td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2017). STEL: 1000 ppm 15 minutes.</td>
</tr>
<tr>
<td>Talc</td>
<td>NIOSH REL (United States, 10/2016). TWA: 2 mg/m³ 10 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV (United States, 3/2017). TWA: 2 mg/m³ 8 hours. Form: Respirable fraction</td>
</tr>
<tr>
<td>Light Aliphatic Hydrocarbon</td>
<td>OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 400 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>ACGIH TLV (United States, 3/2017). TWA: 10 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016). TWA: 15 mg/m³ 8 hours. Form: Total dust</td>
</tr>
<tr>
<td>Mineral Spirits 140-Flash</td>
<td>OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 400 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Xylene</td>
<td>ACGIH TLV (United States, 3/2017). TWA: 100 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 434 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 150 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 651 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 435 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>ACGIH TLV (United States, 3/2017). TWA: 50 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 242 mg/m³ 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 100 ppm 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>STEL: 483 mg/m³ 15 minutes.</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2016). TWA: 100 ppm 10 hours.</td>
</tr>
<tr>
<td></td>
<td>TWA: 480 mg/m³ 10 hours.</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours.</td>
</tr>
</tbody>
</table>
### Occupational exposure limits (Canada)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketoxime</td>
<td>AIHA WEEL (United States, 10/2011). Skin sensitizer. TWA: 10 ppm 8 hours.</td>
</tr>
<tr>
<td>Acetone</td>
<td>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1200 mg/m³ 8 hours. 15 min OEL: 1800 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes. CA British Columbia Provincial (Canada, 6/2017). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. CA Ontario Provincial (Canada, 7/2015). TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes. CA Quebec Provincial (Canada, 1/2014). TWAEV: 500 ppm 8 hours. TWAEV: 1190 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 2380 mg/m³ 15 minutes. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.</td>
</tr>
<tr>
<td>Solvent naphtha (petroleum), medium aliph.</td>
<td></td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. The protection time of the gloves cannot be accurately estimated.

**Safety eyewear** complying with an approved standard should be used when a risk assessment indicates this is necessary to provide the necessary protection.

**Eye/face protection**

For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### Occupational exposure limits (Mexico)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mineral Spirits 140-Flash</strong></td>
<td></td>
</tr>
<tr>
<td>TWAEV: 1590 mg/m³ 8 hours. CA Ontario Provincial (Canada, 7/2015). TWA: 525 mg/m³ 8 hours. CA Quebec Provincial (Canada, 1/2014).</td>
<td></td>
</tr>
<tr>
<td>TWAEV: 400 ppm 8 hours. TWA: 1590 mg/m³ 8 hours. CA Ontario Provincial (Canada, 7/2015).</td>
<td></td>
</tr>
<tr>
<td>TWA: 525 mg/m³ 8 hours. AIHA WEEL (United States, 10/2011). Skin sensitizer. TWA: 10 ppm 8 hours.</td>
<td></td>
</tr>
<tr>
<td><strong>Methyl Ethyl Ketoxime</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection**

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Section 8. Exposure controls/personal protection

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid.
Color: Not available.
Odor: Not available.
Odor threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: Not available.
Flash point: Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
Evaporation rate: 5.6 (butyl acetate = 1)
Flammability (solid, gas): Not available.
Lower and upper explosive (flammable) limits:
  Lower: 0.9%
  Upper: 12.8%
Vapor pressure: 101.3 kPa (760 mm Hg) [at 20°C]
Vapor density: 1.55 [Air = 1]
Relative density: 0.74
Solubility: Not available.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Kinematic (40°C (104°F)): <0.205 cm²/s (<20.5 cSt)
Molecular weight: Not applicable.
Aerosol product:
  Type of aerosol: Spray
  Heat of combustion: 31.591 kJ/g

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions:
Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: Avoid all possible sources of ignition (spark or flame).

Incompatible materials: No specific data.

Hazardous decomposition products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5800 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>658000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Xylene</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>5000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>4300 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketoxime</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2255 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>930 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Eyes - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>186300 parts per million</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 microliters</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>20 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>395 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Talc</td>
<td>Skin - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>72 hours 300 Micrograms Intermittent</td>
<td>-</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>Skin - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>72 hours 300 Micrograms Intermittent</td>
<td>-</td>
</tr>
<tr>
<td>Xylene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>87 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 5 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rat</td>
<td>-</td>
<td>8 hours 60 microliters</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 Percent</td>
<td>-</td>
</tr>
<tr>
<td>Methyl Ethyl Ketoxime</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 microliters</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talc</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>-</td>
<td>2B</td>
<td>-</td>
</tr>
<tr>
<td>Xylene</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

Reproductive toxicity

Not available.

Teratogenicity

Not available.
Section 11. Toxicological information

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Propane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Butane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Light Aliphatic Hydrocarbon</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Mineral Spirits 140-Flash</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Xylene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Propane</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Butane</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Talc</td>
<td>Category 1</td>
<td>Inhalation</td>
<td>Lungs</td>
</tr>
<tr>
<td>Light Aliphatic Hydrocarbon</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Mineral Spirits 140-Flash</td>
<td>Category 1</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Xylene</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Aspiration hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Propane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Butane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Light Aliphatic Hydrocarbon</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Mineral Spirits 140-Flash</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Xylene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure:

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
### Skin contact
- May cause an allergic skin reaction.

### Ingestion
- Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

#### Eye contact
- Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness

#### Inhalation
- Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness

#### Skin contact
- Adverse symptoms may include the following:
  - irritation
  - redness

#### Ingestion
- Adverse symptoms may include the following:
  - nausea or vomiting

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

#### Long term exposure

- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.
- **Potential chronic health effects**: Not available.

### General
- Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

### Carcinogenicity
- Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

### Mutagenicity
- No known significant effects or critical hazards.

### Teratogenicity
- No known significant effects or critical hazards.

### Developmental effects
- No known significant effects or critical hazards.

### Fertility effects
- No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates
- Not available.
Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>Acute LC50 6000000 µg/l Fresh water</td>
<td>Algae - Selenastrum sp.</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 6900 mg/l Fresh water</td>
<td>Crustaceans - Gammarus pulex</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5600 ppm Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 4.95 mg/l Marine water</td>
<td>Fish - Poecilia reticulata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.016 ml/L Fresh water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.1 ml/L Fresh water</td>
<td>Crustaceans - Daphniidae</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Fish - Daphnia magna - Neoneate</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>Acute LC50 &gt;100000 ppm Fresh water</td>
<td>Fish - Fundulus heteroclitus</td>
<td>96 hours</td>
</tr>
<tr>
<td>Xylene</td>
<td>Acute LC50 8500 µg/l Marine water</td>
<td>Fish - Fundulus heteroclitus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.1 mg/l Fresh water</td>
<td>Crustaceans - Palaemonetes pugio</td>
<td>48 hours</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>Acute LC50 13400 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1 to 10 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 8.9 mg/l Marine water</td>
<td>Crustaceans - Chaetogammarus marinus - Young</td>
<td>48 hours</td>
</tr>
<tr>
<td>Methyl Ethyl Ketoxime</td>
<td>Acute LC50 843000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Xylene</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lt. Aliphatic Hydrocarbon Solvent</td>
<td>-</td>
<td>10 to 2500</td>
<td>high</td>
</tr>
<tr>
<td>Xylene</td>
<td>-</td>
<td>8.1 to 25.9</td>
<td>low</td>
</tr>
<tr>
<td>Vinyl Toluene</td>
<td>-</td>
<td>100 to 320</td>
<td>low</td>
</tr>
<tr>
<td>Methyl Ethyl Ketoxime</td>
<td>-</td>
<td>2.5 to 5.8</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

| Soil/water partition coefficient (K<sub>oc</sub>) | Not available. |

**Other adverse effects**

No known significant effects or critical hazards.

Section 13. Disposal considerations

**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.
# Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>IATA</th>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN1950</td>
<td>UN1950</td>
<td>UN1950</td>
<td>UN1950</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>AEROSOLS</td>
<td>AEROSOLS</td>
<td>AEROSOLS, flammable</td>
<td>AEROSOLS</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Additional information</td>
<td>ERG No. 126</td>
<td>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).</td>
<td>ERG No. 126</td>
<td>ERG No. 126</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available.

**Proper shipping name**: Not available.

**Ship type**: Not available.

**Pollution category**: Not available.

# Section 15. Regulatory information

**SARA 313**
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

**California Prop. 65**
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
Section 16. Other information

Hazardous Material Information System (U.S.A.)

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE AEROSOLS - Category 1</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>GASES UNDER PRESSURE - Compressed gas</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>ASPIRATION HAZARD - Category 1</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

Date of printing : 4/12/2018
Date of issue/Date of revision : 4/12/2018
Date of previous issue : 11/3/2017
Version : 11

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the
Section 16. Other information

product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.
SAFETY DATA SHEET

1. Identification
Product identifier ACRA-RELEASE (TM) AEROSOL
Other means of identification
Product code 081-028-000
Recommended use Release agent
Recommended restrictions Not available.
Manufacturer/Importer/Supplier/Distributor information
Manufacturer
   Company name BROWNELLS, INC.
   Address 200 South Front Street
             Montezuma, Iowa 50171
             United States
   Telephone (641) 623-5401
   Website www.brownells.com
   E-mail Not available.
   Emergency phone number INFOTRAC Registrant #79335
24 hour Emergency Number, Domestic: (800) 457-4280
24 hour Emergency Number, Foreign: +1(352) 323-3500

2. Hazard(s) identification
Physical hazards Gases under pressure Compressed gas
Health hazards Serious eye damage/eye irritation Category 2B
   Specific target organ toxicity, single exposure Category 3 narcotic effects
Environmental hazards Not available.
OSHA defined hazards Not available.
Label elements

Signal word Warning
Hazard statement Contains gas under pressure; may explode if heated. Causes eye irritation. May cause drowsiness or dizziness.
Precautionary statement
Prevention Pressurized container: Do not pierce or burn, even after use. Avoid breathing gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Response If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Call a POISON CENTER or doctor/physician if you feel unwell. If eye irritation persists: Get medical advice/attention.
Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
Not available.

Hazard(s) not otherwise classified (HNOC)
Not available.
3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETHYL ETHER</td>
<td></td>
<td>115-10-6</td>
<td>50 - 60</td>
</tr>
</tbody>
</table>

#: This substance has workplace exposure limit(s).
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

4. First-aid measures

Inhalation
If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.

Skin contact
Take off immediately all contaminated clothing. Remove and isolate contaminated clothing and shoes. Wash off immediately with plenty of water. Wash off with soap and water. Rinse skin with water/shower. Get medical attention if irritation develops and persists. Get medical attention if irritation develops or persists.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Rinse with water. Flush eyes with water as a precaution. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Get medical attention if irritation develops or persists. Get medical attention if irritation persists after washing.

Ingestion
Rinse mouth. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. In the unlikely event of swallowing contact a physician or poison control center. If ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed
Not available.

Indication of immediate medical attention and special treatment needed
Not applicable.

General information
If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet (SDS) to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media
Water. Dry powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Fire may produce irritating, corrosive and/or toxic gases. None known.

Special protective equipment and precautions for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear full protective clothing including self contained breathing apparatus.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

Specific methods
Use water spray to cool unopened containers.

Hazardous combustion products
Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep upwind. Wear appropriate protective equipment and clothing during clean-up. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and materials for containment and cleaning up
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent entry into waterways, sewer, basements or confined areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water. No special environmental precautions required.
7. Handling and storage

Precautions for safe handling
Pressurized container: Do not pierce or burn, even after use. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Do not use if spray button is missing or defective. Avoid contact with skin. Avoid contact with eyes. Do not use in areas without adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities
Level 1 Aerosol. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Avoid exposure to long periods of sunlight. Keep out of the reach of children. Use care in handling/storage.

8. Exposure controls/personal protection

Occupational exposure limits
US. Workplace Environmental Exposure Level (WEEL) Guides

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETHYL ETHER (CAS 115-10-6)</td>
<td>TWA</td>
<td>1880 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment
Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection
Wear appropriate chemical resistant gloves.

Other
Wear suitable protective clothing.

Respiratory protection
If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Physical state
Gas.
Form
Aerosol.
Color
Not available.
Odor
Not available.
Odor threshold
Not available.
pH
Not available.
Melting point/freezing point
Not available.
Initial boiling point and boiling range
N/A
Flash point
None
Evaporation rate
Not available.
Flammability (solid, gas)
Not available.
Upper/lower flammability or explosive limits
Flammability limit - upper (%)
Not available.
Explosive limit - lower (%)
Not available.
Explosive limit - upper (%)
Not available.

Vapor pressure 10.02 psia @ 70 degree F.
Vapor density 4
Relative density Not available.
Solubility(ies)
Solubility (water) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.

10. Stability and reactivity
Reactivity Not available.
Chemical stability Stable under normal temperature and recommended storage conditions.
Possibility of hazardous reactions Hazardous polymerization does not occur.
Conditions to avoid Avoid high temperatures.
Incompatible materials None known.
Hazardous decomposition products Thermal oxidative decomposition can produce hydrochloric and hydrofluoric acids, carbonyl halides such as phosgene, silicon dioxide, carbon oxides, and traces of incompletely burned carbon compounds, formaldehyde.

11. Toxicological information
Information on likely routes of exposure
Inhalation May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact No adverse effects due to skin contact are expected.
Eye contact Causes eye irritation.
Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects
Acute toxicity Narcotic effects.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACRA-RELEASE (TM) AEROSOL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>494 ppm, 15 Minutes estimated</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>386 ppm, 30 Minutes estimated</td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>DIMETHYL ETHER (CAS 115-10-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>494 ppm, 15 Minutes estimated</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
<td>--------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>386 ppm, 30 Minutes</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>308.5 mg/l, 4 Hours</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**

Due to partial or complete lack of data the classification is not possible.

**Serious eye damage/eye irritation**

Causes eye irritation.

**Respiratory or skin sensitization**

- **Respiratory sensitization**
  
  Due to partial or complete lack of data the classification is not possible.

- **Skin sensitization**
  
  Due to partial or complete lack of data the classification is not possible.

- **Germ cell mutagenicity**
  
  Due to partial or complete lack of data the classification is not possible.

- **Carcinogenicity**
  
  Due to partial or complete lack of data the classification is not possible.

- **Reproductive toxicity**
  
  Due to partial or complete lack of data the classification is not possible.

- **Specific target organ toxicity**
  - **single exposure**
    
    May cause drowsiness and dizziness.
  - **repeated exposure**
    
    Due to partial or complete lack of data the classification is not possible.

- **Aspiration hazard**
  
  Not likely, due to the form of the product.

- **Chronic effects**
  
  Prolonged inhalation may be harmful.

### 12. Ecological information

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions**

Dispose of in accordance with current, applicable local, state, and federal regulations.

**Waste from residues / unused products**

Not available.

**Contaminated packaging**

Do not re-use empty containers.

### 14. Transport information

**DOT**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Aerosols</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.2</td>
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<tr>
<td>Class</td>
<td></td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not available.</td>
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**IATA**

<table>
<thead>
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<td>Class</td>
<td></td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Other information
Passenger and cargo aircraft
Forbidden.
Cargo aircraft only
Forbidden.

IMDG
UN number UN1950
UN proper shipping name Aerosols
Transport hazard class(es)
Class 2.2
Subsidiary risk -
Packing group Not applicable.
Environmental hazards
Marine pollutant No.
EmS Not available.
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not available.

15. Regulatory information
US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
DIMETHYL ETHER (CAS 115-10-6) Listed.

SARA 304 Emergency release notification
Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
DIMETHYL ETHER (CAS 115-10-6)

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
DIMETHYL ETHER (CAS 115-10-6)

US. New Jersey Worker and Community Right-to-Know Act
DIMETHYL ETHER (CAS 115-10-6)

US. Pennsylvania Worker and Community Right-to-Know Law
DIMETHYL ETHER (CAS 115-10-6)

US. Rhode Island RTK
DIMETHYL ETHER (CAS 115-10-6)

US. California Proposition 65
Not Listed.

International Inventories

<table>
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<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Chemical Substances (EINECS)</td>
<td>Yes</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 03-13-2015
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information
Simichrome Polish

TECHNICAL DATA SHEET

Simichrome Polish is made in Germany.

It is a cream type paste, available in tubes and cans. It will polish, without scratching, any ferrous or non-ferrous metals. Simichrome is also excellent for removing shallow scratches from Plexiglas, or most any plastic.

Simichrome Polish is used to purge or clean molds in the plastic industry.

We have been advised that most often approximately 15% to 20% of Simichrome is mixed well with either scrap or re-grind, then run through the cycle. Sorry, we cannot be more specific, but for obvious reasons a lot of users are not too interested in sharing their research information.

For industrial users we offer this information:
- DOT – not restricted article

Composition:
- Ammonium oleate
- Water
- White spirit
- Alumina AL\(_2\)O3
- Iron oxide red colorant
- Fatty acid diethanolamide

Boiling point: not exact, approximately 75\(^\circ\) C. Non-flammable.

Particle size: 8 to 10 microns.

Shelf life: about 5 years, stored cool and dry.

Storage: Upper - 50\(^\circ\) C. / Lower - 20\(^\circ\) C.

Neutralizing chemicals: Vinegar, Citric Acid

Eye and skin irritation: Mild (rinse with water for eye contamination.)

Meets Military Spec. MIL P 6888A (ASG)

Gesswein Co. Inc., 201 Hancock Ave., Bridgeport CT 06605
Tel: 203-366-5400  www.gesswein.com  info@gesswein.com