Plywood for Concrete Forming Panels

Types of Plywood Suitable for Forming Panels

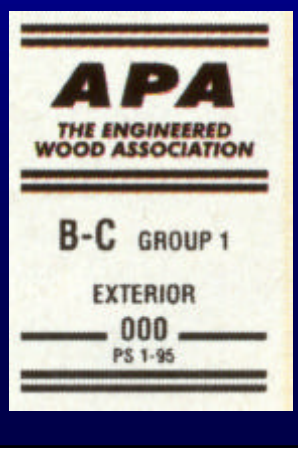
- Typical panels use 5, 7, or 9 plies
- Nominal thickness:
  - 15/32, 1/2, 19/32, 5/8, 23/32, 3/4
- Plywood forming panels are exterior-type plywood

Types of Plywood NOT Suitable for Forming Panels

- Exposure-1 panels (intended for interior use - with exterior glue) can be used but are not recommended if you want to reuse the panel
  - they use D grade veneers - leads to more swelling on face of panels when they get wet

Types of Plywood NOT Suitable for Forming Panels

- Typical Exterior plywood may not be appropriate either
  - it has C grades of veneer (not sanded and has knotholes)
  - may not be good for appearance of concrete
- Exterior plywood with B grade veneers is often used
  - B grade veneers are sanded, knot holes are filled



Types of Plywood Suitable for Forming Panels

- Class I plywood forming panels:
  - non-overlaid (B-B)
  - medium density overlaid (MDO)
  - high-density overlaid (HDO)

    - overlays are resin-impregnated fiber sheets bonded to face of plywood

Types of Plywood Suitable for Forming Panels

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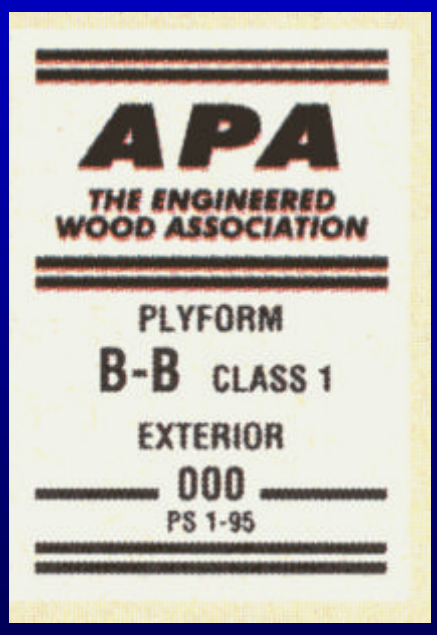
  - medium density overlaid (MDO)
  - high-density overlaid (HDO)

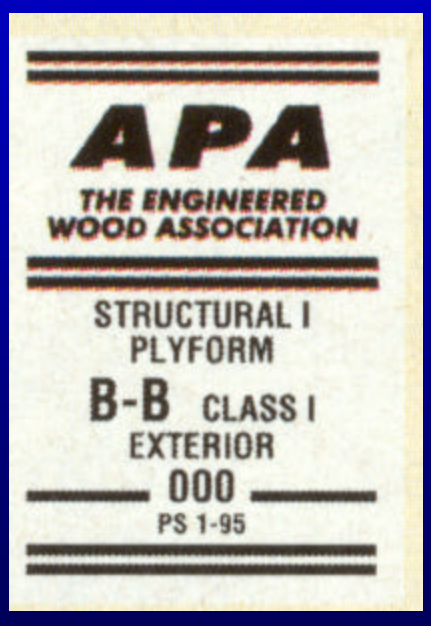
Non-overlaid forming panels

- Class I B-B panel
  - uses Group I (high strength) species for face plies, but can have weaker interior plies
  - when care is taken, panels can be reused 5 to 10 times
  - these are the most common forming panels



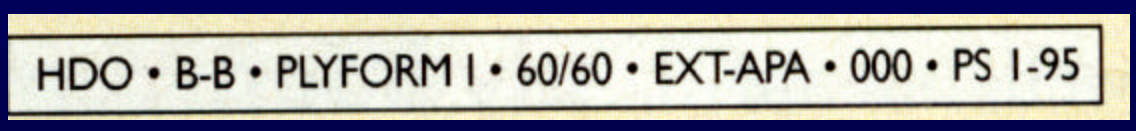
Non-overlaid forming panels

- Structural I, Class I B-B panel
  - uses Group I (high strength) species for all plies
  - designed for engineered forming applications
  - Structural I panels have greater bending and shear strength



Overlaid forming panels

- Overlaid plywood uses resign-impregnated sheets bonded to the face and back veneers
- Overlays add water resistance and dimensional stability to the plywood
- Overlays give a smoother, more durable forming surface
- Overlays can be High Density (HDO) or Medium Density (MDO) and can be ordered on one or both sides of panel



Overlaid forming panels

- HDO has minimum 45 % resin content
  - resin makes overlay adhere to panel better
  - better for glossy concrete finish
  - can be reused 20-50 times
- MDO (for concrete) has 35-40% resin
  - overlay on one side usually, makes smooth matte finish
- MDO for other uses has < 35% resin
  - used for other construction applications where it will be painted (e.g. trim, molding, etc.)

Using / maintaining formwork

- Plywood forming panels are treated with release agents at the manufacturing plant
  - helps remove the form from the concrete when finished curing
- Release agents should be re-applied before each use to preserve the plywood
- Make sure panels have an edge sealer (either by the plant or at the jobsite)
  - if not edge sealed, the edges will swell when they get wet
- Use wooden wedges when removing panels (don't use metal pry bars)

Using/maintaining formwork

- Cleaning:
  - use fiber brush and hardwood wedges
  - re-treat with release agent
- For storage:
  - stack panels face-together
  - stack face to face / back to back
  - keep panels out of sun and rain