

DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 6 • WOODS & PLASTICS

06 65 00 • PLASTIC & COMPOSITE TRIM

SECTION INCLUDES

Plastic Trim & Panels
Wood-Plastic Composite Trim and Decking

RELATED SECTIONS

06 20 00 Finish Carpentry
06 50 00 Structural Plastics and Composites
07 40 00 Siding
07 90 00 Sealants
08 10 00 Doors & Frames
08 50 00 Windows
09 90 00 Painting

TECHNICAL STANDARDS

ASTM D570 Water Absorption in Plastics
ASTM D638 Tensile Properties in Plastics
ASTM D198 Compressive Strength
ASTM D696 Coefficient of Thermal Expansion
ASTM D 1037 Water Absorption by Weight
ASTM D2394 Static Coefficient of Friction
ASTM D1761 Screw Withdrawal
ASTM E 84 Flame Spread Index

GENERAL DESIGN CONSIDERATIONS

Plastic and composite lumber and trim have become common replacement materials for exterior wood trim and deck applications. Painted wood trim, metal clad trim and treated wood lumber and decking has long been a source of maintenance issues. Composite and plastic materials provide the advantage of lower maintenance due to the resistance to rot and decay. When specifying specific component applications, care must be taken to select the appropriate product based on:

- The intended use of the material
- Fire resistance
- Material manufacturing process
- Material Composition (recycled material content)
- Life cycle cost



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PLASTIC TRIM

MATERIALS

Expanded cellular PVC material is fabricated from the Celula process that produces larger cells with a hard glossy shell or the Free Foam Process that produces a uniform cell density and a cloudy surface. The Free Foam product is more desirable because of its denser composition and ability to accept a painted finish.

PVC lumber products are made from virgin PVC or varying amounts of recycled PVC, polyethylene (HDPE and LDPE), or polystyrene (PS). Recycled Polyethylene possesses lesser chemical hazards making it environmentally preferable to PVC or PS. PVC materials with a higher recycled content is preferred.



Specify products with UV stabilizers, single source recycled content and a minimum 25 year warranty.

Specify the use of plastic materials as an acceptable alternate to wood when:

- Application requires a product that is resistant to moisture, corrosive substances, and insects
- Application requires a product that will not rot, splinter or crack
- Application requires no waterproofing, staining or similar maintenance
- Application requires resistance to graffiti.

ACCEPTABLE MANUFACTURERS

Azek, Kleer and Versatex

WOOD PLASTIC COMPOSITE TRIM

MATERIALS

Wood-Plastic composite material has been typically used for decking but is also used as trim. The material is made from a 50/50 mix of recycled plastic resins and reclaimed wood such as sawdust from manufacturing plants. The plastic encapsulates and binds the wood to resist moisture penetration and degradation from rot.



Material choices should be based on durability, cost and availability. Specify no greater than 50/50 mix of wood to plastic ratio. Select materials containing UV stabilizers

Specify light (high reflectance) colors to mitigate heat build-up and thermal movement and to minimize fading from ultraviolet light.

ACCEPTABLE MATERIALS

Acceptable manufacturers include: Timbertech (Crane Plastics); Fiberon (Fiber Composites); Carefree Composite, (USPL); Fibrex,(Anderson); Boardwalk, (CertainTeed); Weatherbest (LP Specialty Products).

DESIGN

Do not use paint or stain as a finish.

INSTALLATION

Install all trim materials in strict accordance with manufacturer's specifications.

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PLASTIC ACCESSORIES

MATERIALS

Specify pre-formed plastic products for exterior building trim components such as, gable vents, hose-bib mounting blocks, exterior light fixture mounting blocks, column covers, and corner trim to provide a clean, finished appearance for exterior accessories.