

SECTION 06 65 00  
SIMULATED WOOD TRIM

**A. GENERAL**

**A.1 SECTION INCLUDES**

PVC products including

- A. PVC Trimboard
- B. PVC Sheet/Board
- C. PVC Moulding
- D. PVC Fabricated Trim Profiles

**A.2 RELATED SECTIONS**

- A. Section 06 20 00 – Finish Carpentry.
- B. Section 06 30 00 – Exterior Carpentry.
- C. Section 06 40 00 – Architectural Woodwork.
- D. Section 07 91 16 – Joint Gaskets.
- E. Section 09 90 00 – Painting & Coating.

**A.3 REFERENCES**

- A. ASTM D 570 - Water Absorption of Plastics.
- B. ASTM D 792 – Standard Test Method for Density and Specific Gravity.
- C. ASTM D 638 - Tensile Properties of Plastics.
- D. ASTM D 790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D 1761 - Mechanical Fasteners in Wood.
- F. ASTM D 256 - Determining the Pendulum Impact Resistance of Plastics.
- G. ASTM D 696 - Coefficient of Linear Thermal Expansion of Plastics Between minus 30 degrees C and plus 30 degrees C with a Vitreous Silica Dilatometer.
- H. ASTM E 84 - Surface Burning Characteristics of Building Materials.
- I. ASTM D 635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- J. ASTM D 648 - Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
- K. ASTM D 2240 – Shore Hardness.

#### **A.4 SUBMITTALS**

- A. Submit under provisions of Section 01 30 00
- B. Product Data: Manufacturer's data sheets to be used, including:
  - 1. Preparation of instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product and patterns.

#### **A.5 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Manufacturer with a minimum of 10 years producing PVC sheet & trim products.
- B. Installer Qualifications: Installer with a minimum of 3 year's experience with the installation of PVC trim products.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  - 1. Finish areas designated by Architect.
  - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
  - 3. Refinish mock-up area as required to produce acceptable work.
  - 4. Approved mock-up shall be comparison standard for remaining work

#### **A.6 DELIVERY, STORAGE, AND HANDLING**

- A. Keep materials in original, unopened packaging until they are ready for use.
- B. Place products on a flat, stable surface supported by a full pallet. Handle with care to avoid chipping, denting, or damage to edges and corners.
- C. Protect materials with suitable covering to prevent accumulation of dust, debris, or jobsite contaminants.
- D. Store in a shaded, well-ventilated area, away from excessive heat, open flames, or other potential sources of thermal exposure.

#### **A.7 SEQUENCING**

- A. Schedule and supply materials to interfacing trades in a manner that prevents disruption to the overall construction program.

#### **A.8 PROJECT CONDITIONS**

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

#### **A.9 WARRANTY**

- A. Limited Warranty to the original Owner under normal and proper use to be free of manufacturing defects for a period of 25 years

## B. PRODUCTS

### B.1 MANUFACTURERS

- A. Acceptable Manufacturer: Kumar Arch Tech Ltd (Echon) which is located at: Udaipur, Rajasthan, India, Email: [info@EchonBuildingProducts.com](mailto:info@EchonBuildingProducts.com), Web: <https://www.echonbuildingproducts.com>

### B.2 MATERIALS

- A. PVC material with a small-cell microstructure.
1. Physical:
    - a. Water Absorption: Less than 1 per cent when tested in accordance with ASTM D 570
    - b. Density: 0.50 g/cm<sup>3</sup> when tested in accordance with ASTM D 792.
    - c. Shore hardness: >60 when tested in accordance with ASTM D 2240
  2. Mechanical:
    - a. Tensile Strength: 1520 psi when tested in accordance with ASTM D 638
    - b. Modulus of Elasticity: 198,000 psi when tested in accordance with ASTM D 638
    - c. Flexural Strength: 2330 psi when tested in accordance with ASTM D 790.
    - d. Flexural Modulus: 163,000 psi when tested in accordance with ASTM D 790.
    - e. Notched Izod Impact: 0.189 ft-lbs/in tested in accordance to ASTM D 256
    - f. Screw Hold: 330.6 lbf/in when tested in accordance with ASTM D 1761.
  3. Thermal:
    - a. Coefficient of Linear Expansion:  $3.25 \times 10^{-5}$  in/in/°F when tested in accordance with ASTM D 696.
    - b. Flame Spread Index: 45 when tested in accordance with ASTM E 84.
    - c. Burning Rate: Self Extinguishing, will not burn when active flame is removed tested in accordance with ASTM D 635.
    - d. Heat Deflection Temp (66 psi): 147.2 °F when tested in accordance with ASTM D 648.
  4. Manufacturing Tolerances
    - a. Variation in component length: Minus 0.00 / plus 1/2 inch.
    - b. Variation in component width: plus or minus 1/32 inch.
    - c. Variation in component thickness: plus or minus 5%
    - d. Variation in component edge cut: plus or minus 2 degrees.
    - e. Variation in Density plus or minus 0.025 grams per cubic centimeter
  5. Workmanship, Finish, and Appearance:
    - a. PVC products that are free of voids, holes, cracks, and/or other defects.
    - b. Painting is not required for protection; however, products may be painted to achieve a desired color or finish.

### B.3 SIMULATED WOOD TRIM

- A. PVC Trimboard: ECHON Trimboard with sealed edge, designed with a natural appearance.
1. Finish:
    - a. Smooth
    - b. Woodgrain
  2. Size:
    - a. Nominal Width.
      - 1) 3 inches (Actual Width 2.5 Inches)
      - 2) 4 inches (Actual Width 3.5 Inches)
      - 3) 5 inches (Actual Width 4.5 Inches)
      - 4) 6 inches (Actual Width 5.5 Inches)
      - 5) 8 inches (Actual Width 7.25 Inches)
      - 6) 10 inches (Actual Width 9.25 Inches)
      - 7) 12 inches (Actual Width 11.25 Inches)
      - 8) 16 inches (Actual Width 15.25 Inches)
    - b. Nominal Thickness
      - 1) 5/8 inch (5/8 inch actual thickness)
      - 2) 1 inch (3/4 inch actual thickness)

- 3) 5/4 inch (1 inch actual thickness)
  - 4) 6/4 inch (1-1/4 inch actual thickness)
  - 5) 8/4 inch (1-1/2 inch actual thickness)
  - c. Length:
    - 1) 12 feet
    - 2) 18 feet
    - 3) Custom lengths
- B. Sheet Board: ECHON Sheet is for use as sheet materials or to create columns and gingerbread millwork.

- 1. Finish:
  - a. Smooth
  - b. Woodgrain
- 2. Size:
  - a. Width/Length:
    - 1) 4 Feet by 8 Feet
    - 2) 4 Feet by 10 Feet
    - 3) 4 Feet by 12 Feet
    - 4) 4 Feet by 18 Feet
  - b. Thickness:
    - 1) 1/4 inch
    - 2) 3/8 inch
    - 3) 1/2 inch
    - 4) 5/8 inch
    - 5) 3/4 inch
    - 6) 1 inch
    - 7) 1-1/4 inch
    - 8) 1-1/2 inch

- C. ECHON Mouldings: ECHON Mouldings designed to complement interior & exterior trim.

- a. Bead moulding – 1/2" x 3/8"
- b. Bed moulding – 9/16" x 1-11/16"
- c. Crown 3" – 9/16" x 2-5/8"
- d. Crown 4" – 9/16" x 3-5/8"
- e. Crown 5" – 11/16" x 4-5/8"
- f. Crown 6" – 9/16" x 5-1/4"
- g. Rams crown – 1-13/32" x 2-1/16"
- h. Solid crown – 1-3/8" x 2-3/4"
- i. Drip cap – 11/16" x 1-5/8"
- j. Historic sill – 1-3/4" x 2"
- k. Sill nose – 1-5/16" x 1-11/32"
- l. Sill – 3-1/4" x 1-3/16"
- m. Window sill – 4-11/16" x 1-1/4"
- n. Back band – 1-3/8" x 1-3/8"
- o. Base cap – 11/16" x 1-1/8"
- p. Base cap – 11/16" x 1-5/8"
- q. Brick mould – 2" x 1-1/4"
- r. Brick mould mitered – 2" x 1-1/4"
- s. Brick mould nail flg – 1-1/4" x 3"
- t. Brick mould nail flg – 2" x 13/32"
- u. Casing base – 9/16" x 3-1/4"
- v. Colonial casing – 11/16" x 2-9/32"
- w. Florida brick mould – 11/16" x 1-5/8"
- x. Garage weather stop – 1-7/8" x 13/32"
- y. Garage weather stop – 1-1/4" x 3"
- z. Rake mould – 2" x 1-1/16"
- aa. Shingle mould – 11/16" x 1-3/4"
- ab. Shingle mould – 1-5/8" x 11/16"

- ac. Baluster – 1-1/2" x 1-1/2"
- ad. Quarter round – 1/2" x 1/2"
- ae. Quarter round – 3/4" x 3/4"
- af. Quarter round – 5/8" x 5/8"
- ag. Scotia cove – 3/4" x 3/4"
- ah. Nose & cove – 5/8" x 3/4"
- ao. Screen bead / hole strip – 1/4" x 3/4"
- ar. Attic vent louver – 3/4" x 3-1/2"
- as. Chair rail – 5/8" x 2-1/2"
- at. Door jamb – 4-9/16" x 1-1/4"
- au. Flat utility door – 5/16" x 5-13/16"
- av. Jamb fluted – 5-13/16" x 11/16"
- aw. Lattice 1.5" – 1/4" x 1-1/2"
- ax. Lattice 1.75" – 1/4" x 1-1/4"
- ay. O.s. corner – 1-1/8" x 1-1/8"
- az. Pvc stop – 1-1/4" x 3/8"
- ba. Shoe mould – 3/4" x 5/16"
- bb. Speed base – 9/16" x 5-1/4"

- 1. Length:
  - a. 8 Feet
  - b. 12 Feet
  - c. 16 Feet
  - d. 17 Feet
  - e. 18 Feet
  - f. Custom Lengths

- 2. Finish:
  - a. Smooth finish.

- D. Fabricated trim profiles
  - a. Corner boards
  - b. Corner with J channel
  - c. Skirt board
  - d. J-channel Trim
  - e. J-channel Trim with Flange Slot
  - f. Window surrounds with Flange Slot

## B.4 ACCESSORIES

### A. Fasteners:

- 1. Use 12-gauge stainless steel fasteners suitable for wood trim and siding applications. Fasteners shall possess adequate tensile and flexural strength to prevent bending during installation.
- 2. Select fasteners with slender shanks, blunt tips, and full round heads for optimal performance.
- 3. Fastener length shall be sufficient to achieve a minimum penetration of 1-1/2 inches into the substrate.
- 4. Do not use staples, small brads, or wire nails. Fine-threaded wood screws and ring-shank fasteners are not recommended.
- 5. Standard pneumatic nail guns may be used for installation.
- 6. Pre-drilling is generally not required, except when using larger fasteners or when installing in low-temperature conditions.
- 7. Provide a minimum of two fasteners at each framing member for trim board applications. Boards and sheets 8 inches and wider shall require additional fastening.
- 8. Position fasteners no more than 2 inches from board ends.

9. Do not fasten materials over hollow or irregular surfaces. Ensure fastening into flat, solid substrates only.
  10. Sheet and beadboard products of 3/8 inch and 1/2 inch thickness are not intended for ripping into trim components. These materials shall be bonded and mechanically secured to a suitable substrate.
- B. Adhesives: Finishing System:
1. Bond simulated wood trim to itself using PVC cement or adhesives formulated for cellular PVC to minimize joint separation.
  2. Secure glued joints with mechanical fasteners, or fasten on both sides of the joint, to allow proper curing and bond development.
  3. Surfaces to be bonded shall be clean, smooth, and in full contact with each other.
  4. Alternative adhesive systems may be used where appropriate; consult the adhesive manufacturer for compatibility and performance suitability.
- C. Nail Hole Filler: Use a compatible concealed fastening and plug system designed to provide a clean, finished appearance and conceal exposed fastener locations.
- D. Sealants: Provide urethane, polyurethane, polymer-blend, or acrylic-based sealants that are free of silicone, in accordance with Section 07 91 16 – Joint Gaskets.

## C. EXECUTION

### C.1 EXAMINATION

- A. Do not commence installation until substrates have been adequately prepared.
- B. Verify all governing dimensions and confirm that substrate conditions are suitable prior to installation.
- C. Where substrate preparation is performed by others, report any unsatisfactory conditions to the Architect and do not proceed until issues are resolved

### C.2 PREPARATION

- A. Ensure all surfaces are thoroughly cleaned and free of dust, debris, and contaminants prior to installation.
- B. Inspect substrates and correct any conditions that may adversely affect installation, including cleaning and necessary repairs.
- C. Prepare surfaces in accordance with industry procedures to achieve optimal performance under project-specific conditions.

### C.3 INSTALLATION

- A. Install in accordance with market standards.
- B. Cutting:
  1. Cut using standard woodworking saws. Conventional carbide-tipped blades designed for cutting wood are preferred. Avoid using fine-tooth metal-cutting blades.
  2. Rough-cut edges are typically caused by excessive friction, poor board support, or worn or improper tooling.
- C. Drilling:
  1. Drilled using standard woodworking drill bits. Do not use drill bits made for rigid PVC.
  2. Avoid frictional heat build-up.
  3. Remove shavings periodically from a drill hole as necessary.

- D. Milling and Moulding:
  - 1. Milled or moulded using standard milling or moulding machines found in millwork shops.
  - 2. Rake angle 20 to 30 degrees.
  - 3. Cutting speed to be optimized with the number of knives and feed rate.
- E. Routing:
  - 1. Rout using standard bits and tools use to route wood.
- F. Edge Finishing
  - 1. Edges can be finished by sanding, grinding or filling with traditional wood working tools.
- G. Nail Location
  - 1. For trim board application use two fastener per framing member use additional fasteners for trim board 8 inch and wider.
- H. Expansion and Contraction:
  - 1. Expansion and contraction of simulated wood trim will occur with temperature changes. Properly fastening along the entire length is required to minimize expansion and contraction.
  - 2. Allow 1/4 inch space per 18-foot run of trim for expansion and contraction.
  - 3. Bond joints between pieces of simulated wood trim to eliminate separation.
  - 4. Allow expansion and contraction space at the ends of long runs.
- I. Finishing:
  - 1. Clean simulated wood trim with mild detergent and water.
  - 2. Be sure surface to be painted is clean, dry, and free of dirt, loose or peeling paint, mildew, chalk, grease and any other surface contaminants before paint application.
  - 3. Paint as specified in Section 09 90 00.
  - 4. Follow the paint manufacturer's application recommendations.

#### **C.4 PROTECTION**

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION