

# SECTION 06 60 00

## PLASTIC FABRICATIONS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Cellular pvc trim boards for corner boards, soffits, fascias, battens, door pilasters, frieze boards, rake boards, architectural millwork and door/window trim.

#### 1.02 RELATED SECTIONS

- A. Section 06 64 00 - Plastic Paneling.
- B. Section 06 65 00 - Plastic Simulated Wood Trim.
- C. Section 06 66 00 - Custom Ornamental Simulated Woodwork.

#### 1.03 REFERENCES

- A. ASTM D792 - Density and Specific Gravity of Plastics by Displacement.
- B. ASTM D570 - Water Absorption of Plastics.
- C. ASTM D638 - Tensile Properties of Plastics.
- D. ASTM D790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D1761 - Mechanical Fasteners in Wood.
- F. ASTM D5420 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by means of a Striker Impacted by a Falling Weight.
- G. ASTM D256 - Determining the Pendulum Impact Resistance of Plastics.
- H. ASTM D696 - Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous silica Dilatometer.
- I. ASTM D635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- J. ASTM E84 - Surface Burning Characteristics of Building Materials.
- K. ASTM D648 - Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
- L. ASTM D3679 - Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

#### 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, manufacturer's catalogs, SPEC-DATA® product sheet, for specified products.

## 1.04 SUBMITTALS (continued)

- C. Samples: Submit three material samples representative of the texture, thickness and widths shown and specified herein.

## 1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Check with Local Building Code for installation requirements.
- B. Allowable Tolerances:
  - 1. Variation in component length:  $-0.00 / +1.00''$
  - 2. Variation in component width:  $\pm 1/16''$
  - 3. Variation in component thickness:  $\pm 1/16''$
  - 4. Variation in component edge cut:  $\pm 2^\circ$
  - 5. Variation in Density  $-0\% + 10\%$
- C. Workmanship, Finish, and Appearance:
  - 1. Free foam cellular pvc that is homogeneous and free of voids, holes, cracks, and foreign inclusions and other defects. Edges must be square, and top and bottom surfaces shall be flat with no convex or concave deviation.
  - 2. Uniform surface free from cupping, warping, and twisting.

## 1.06 DELIVERY, STORAGE AND HANDLING

- A. Trim materials should be stored on a flat and level surface on a full shipping pallet. Handle materials to prevent damage to product edges and corners. Store materials under a protective covering to prevent jobsite dirt and residue from collecting on the boards.

## 1.07 WARRANTY

- A. Provide manufacturer's 25 year warranty against defects in manufacturing that cause the products to rot, corrode, delaminate, or excessively swell from moisture.

# PART II PRODUCTS

## 2.01 MATERIALS

- A. Acceptable products: AZEK® Trimboards manufactured by Vycom Corporation, 801 Corey Street, Moosic, PA 18507.
- B. Material: Free foam cellular pvc material with a small-cell microstructure and density of  $.55 \text{ grams/cm}^3$ .
  - 1. Material shall have a minimum physical and performance properties specified in Section C on the following page.

C. Performance and physical characteristic requirements:

<u>PROPERTY</u>	<u>UNITS</u>	<u>VALUE</u>	<u>ASTM METHOD</u>
<b>PHYSICAL</b>			
Density	g/cm <sup>3</sup>	0.55	D 792
Water Absorption	%	0.15	D 570
<b>MECHANICAL</b>			
Tensile Strength	psi	2256	D 638
Tensile Modulus	psi	144,000	D 638
Flexural Strength	psi	3329	D 790
Flexural Modulus	psi	144,219	D 790
Nail Hold	Lbf/in of penetration	35	D 1761
Screw Hold	Lbf/in of penetration	680	D 1761
Staple Hold	Lbf/in of penetration	180	D 1761
Gardner Impact	in-lbs	103	D 5420
Charpy Impact (@23°C)	ft-lbs	4.5	D 256
<b>THERMAL</b>			
Coefficient of Linear Expansion	in/in/°F	3.2 x 10-5	D 696
Burning Rate	in/min	No burn when flame removed	D 635
Flame Spread Index	--	25	E 84
Heat Deflection Temp 264 psi	°F	150	D 648
Oil Canning (@140°F)	°F	Passed	D 648

## 2.02 ACCESSORY PRODUCTS

### A. Fasteners:

- Use fasteners designed for wood trim and wood siding (thinner shank, blunt point, full round head) with AZEK®.
- Use a highly durable fastener such as stainless steel or hot-dipped galvanized.
- Staples, small brads and wire nails must not be used as fastening members.
- The fasteners should be long enough to penetrate the solid wood substrate a minimum of 1 1/2".
- Standard nail guns work well with AZEK trim products.
- Use 2 fasteners per every framing member for trimboards applications. Trimboards 12" or wider, as well as sheets, will require additional fasteners.
- Fasteners must be installed no more than 2" from the end of each board.
- AZEK should be fastened into a flat, solid substrate. Fastening AZEK into hollow or uneven areas must be avoided.
- Pre-drilling is typically not required unless a large fastener is used or product is installed in low temperatures.
- 3/8" and 1/2" sheet product is not intended to be ripped into trim pieces. These profiles must be glued to a substrate and mechanically fastened.

### B. Adhesives:

- Glue all AZEK to AZEK joints such as window surrounds, long fascia runs, etc. with AZEK Adhesive, a cellular pvc cement, to prevent joint separation.
- The glue joint should be secured with a fastener and/or fastened on each side of the joint to allow adequate bonding time.
- AZEK Adhesive has a working time of 10 minutes and will be fully cured in 24 hours.
- If standard pvc cements are used, keep in mind these products typically cure quickly which will result in limited working time and may reduce adhesive strength.
- Surfaces to be glued should be smooth, clean and in complete contact with each other.
- To bond AZEK to other substrates, various adhesives may be used. Consult adhesive manufacturer to determine suitability.

### C. Sealants:

- Use urethane, polyurethane or acrylic based sealants without silicone.

## 2.03 FINISHES

A. AZEK products do not require paint for protection, but may be painted to achieve a custom color.

B. Preparation:

- No special surface preparations are required prior to painting - sanding is not necessary for paint adhesion.
- Surface must be clean and dry.
- If desired, nail holes may be filled with polyurethane or acrylic based caulk.
- Use a 100% acrylic latex paint with a Light Reflective Value (LRV) of 55 or higher.
- Follow the paint manufacturer's recommendations to apply.

## PART III EXECUTION

### 3.01 INSTALLATION

A. Manufacturers instructions:

- Comply with manufacturer's product catalog installation instructions and product technical bulletin instructions.

B. Cutting:

- AZEK products can be cut using the same tools used to cut lumber.
- Carbide tipped blades designed to cut wood work well. Avoid fine tooth metal cutting blades.
- Rough edges from cutting may be caused by excessive friction, poor board support, or worn or improper tooling.

C. Drilling

- AZEK products can be drilled using the same tools used to drill lumber.
- Drilling AZEK products is similar to drilling a hardwood. Care should be taken to avoid frictional heat buildup.
- Use standard woodworking drills. Do not use drills made for normal rigid pvc.
- Periodic removal of AZEK shavings from the drill hole may be necessary.

D. Milling

- AZEK products can be milled using standard milling machines used to mill lumber.
- Relief Angle 20° to 30°
- Cutting speed to be optimized with the number of knives and feed rate.

E. Routing

- AZEK products can be routed using standard router bits and the same tools used to rout lumber.
- Carbide tipped router bits are recommended.

F. Edge Finishing

- Edges can be finished by sanding, grinding or filing with traditional woodworking tools.

G. Nail Location

- Use 2 fasteners per every framing member for trimboard applications.
- Trimboards over 12" or wider, as well as sheets, will require additional fasteners.
- Fasteners must be installed no more than 2" from the end of each board.

H. Thermal Expansion and Contraction

- AZEK products expand and contract with changes in temperature.
- Properly fastening AZEK material along its entire length will minimize expansion and contraction.
- When properly fastened, allow for 1/8" per 18 foot of AZEK product for expansion and contraction.
- Joints between pieces of AZEK should be glued to eliminate joint separation. When gaps are glued on a long run of AZEK, allow expansion and contraction at ends of the run.

END OF SECTION