

SECTION 09770 - FIBERGLASS REINFORCED PLASTIC PANELS**PART 1 GENERAL****1.05 SUMMARY**

- A. Section Includes: Special wall surfaces, including fiberglass reinforced plastic wall and ceiling panels.
- B. Related Sections: Section(s) related to this section include:
 - 1. [Work Title]: Division [#] [Title] Section.

1.05 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- B. ASTM International:
 - 1. ASTM D2583 Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
 - 2. ASTM D5319 Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels.
 - 3. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.

1.05 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide fiberglass reinforced plastic (FRP) panels which have been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.05 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, including manufacturer's product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures. Indicate location and dimension of joints and fastener attachments.
- D. Samples: Submit selection and verification samples for finishes, colors and textures.
 - 1. Submit 3 inch × 3 inch samples of each surface and color required.
 - 2. Submit 3 inch samples of each trim profile and trim color required.
- E. Quality Assurance Submittals: Submit the following:
 - 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.

2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.
- F. Closeout Submittals: Submit the following:
1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 2. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

- A. Qualifications:
1. Installer Qualifications: Installer should be experienced in performing work of this section and should have specialized in installation of work similar to that required for this project.
 2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction and capable of approving application method.
- B. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Section.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Package sheets on skids or pallets for shipment to project site.
- D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
1. Store products indoors and protect from moisture, construction traffic and damage.
 2. Store panels flat on clean, dry surface. Do not stand on edge or stack on fresh concrete or other surfaces that emit moisture.
 3. Store panels at least 24 hours with temperature and humidity conditions approximating the average environment of the finished room.
- E. Handling: Remove foreign matter from face of panel by use of a soft bristle brush, avoiding abrasive action.

1.05 PROJECT CONDITIONS

- A. Environmental Requirements:
1. Installation shall not begin until building is enclosed, permanent heating and cooling equipment is in operation and residual moisture from plaster, concrete or terrazzo work has dissipated.
 2. During installation and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used and recommendation of adhesive manufacturer.
 3. Provide ventilation to disperse fumes during application of adhesive as recommended by

adhesive manufacturer.

- B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.05 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - 1. Warranty Period: 10 years commencing on Date of Substantial Completion.

1.05 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.
 - 1. Quantity: Furnish quantity of [Identify items.] units equal to [Specify %.] of amount installed.
 - 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PART 2

2.05 FIBERGLASS REINFORCED PLASTIC (FRP) PANELS

- A. Manufacturer: Kemlite Company, Inc.
- B. Manufacturer: Marlite Company
- C. Manufacturer: Nudo Products
 - 1. Description: Composite plastic panels of random chopped fiberglass roving, modified polyester copolymer, inorganic fillers and pigments. Resistant to rot, corrosion, staining, denting, peeling and splintering. Meets USDA requirements. Comply with ASTM D5319, various grades and classifications.
- D. Panel Size:
 - 1. Wall Panel Width: 48 inches
 - 2. Wall Panel Length: 96 inches Thickness:
 - 3. Standard Panels: 0.12 inch (3.05 mm).
- E. Dimensional Tolerances:
 - 1. Width and Length: 1/8 inch (3.2 mm).
 - 2. Thickness: +/- 10%.
 - 3. Squareness: Not more than 1/8 inch (3.2 mm) out of square.
- F. Panel Finish:
 - 1. Exposed Surface: Pebble-like embossed finish.
 - 2. Back Surface: Smooth. Imperfections that do not affect functional properties are not cause for rejection.
 - 3. Color: Uniform throughout. colors as selected by the Architect from manufacturer's

standard color range.

- G. Panel Physical Properties: Provide products with the following properties:
1. Surface Burning Classification: Class A; flamespread (ASTM E84): 25 or less; smoke developed (ASTM E84): 450 or less.
 2. Surface Burning Classification: Class C; flamespread (ASTM E84): 200 or less; smoke developed (ASTM E84): 450 or less.
 3. Barcol Hardness (ASTM D2583): 25 - 35.
 4. Meets USDA requirements.
- H. Trim: Provide panel manufacturer's standard vinyl moldings to meet project conditions. Provide division bar, inside corner, outside corner and end cap.
1. 0.09 inch (2.3 mm) Contractor Trim: Match panel color.
- I. Fasteners: Nonstaining nylon drive rivets; match panel colors and length to suit project conditions.

2.05 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.05 ACCESSORY MATERIALS

- A. Adhesive: Structural construction adhesive as recommended by adhesive manufacturer.
- B. Sealant: Clear silicone sealant as recommended by sealant manufacturer.

2.05 RELATED MATERIALS

- A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

2.05 SOURCE QUALITY

- A. Source Quality: Obtain fiberglass reinforced plastic (FRP) panels from a single manufacturer. Provide panels and molding only from manufacturer specified to ensure warranty and color harmonization of accessories.

PART 3 EXECUTION

3.05 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.05 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
1. Examine back-up surfaces to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails are countersunk, and joints and cracks are filled flush and smooth with the adjoining surface.
 2. Examine substrates to receive panels to ensure that surfaces are smooth, dry, true and free of dirt and dust.
 3. Do not begin installation until back-up surfaces are in a satisfactory condition.

3.05 INSTALLATION

A. Fiberglass Reinforced Panel (FRP) Installation:

1. Cut and drill panels with carbide tipped saw blades or drill bits, or cut with snips.
2. Install panels with manufacturer's recommended gap for panel field and corner joints.
3. Predrill fastener holes in panels with 1/8 inch (3.2 mm) oversize.
4. For trowel type and application of adhesive, follow adhesive manufacturer's recommendations. Provide water resistant adhesive for high moisture content spaces.
5. Using products acceptable to panel manufacturer, install FRP system in accordance with panel manufacturer's printed instructions.

3.04 CLEANING

- B. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.
1. Remove any adhesive or excessive sealant from panel face using solvent or cleaner recommended by panel manufacturer.
 2. Remove scraps and debris from the site, and leave in a neat and clean condition.

3.05 PROTECTION

- A. Protection: Protect installed product and finished surfaces from damage during construction.

END OF SECTION