SECTION 09 77 20
DECORATIVE FIBERGLASS REINFORCED WALL PANELS

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes: Prefinished polyester glass reinforced plastic sheets and adhered to unfinished [gypsum] [cementitious] [untreated plywood] wallboard.

[Aluminum] or [PVC] trim.

[PVC Wall base.]

* + - * 1. Products Not Furnished or Installed under This Section:

Gypsum [Cementitious] substrate board.

Resilient Base.

* + - 1. RELATED SECTIONS
				1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
				2. Section 09 29 00 – Gypsum [Cementitious] substrate board
				3. Section 06 11 00 - Wood [Metal] Stud Framing
				4. Section 09 90 00 - Painting & Transparent Finishes
				5. Section 09 65 13 - Resilient Base
			2. REFERENCES

References are listed as a convenience and are often deleted in their entirety. If required by the user agency delete references from the list below that are not actually required by the text of the edited section.

* + - * 1. American Society for Testing and Materials: Standard Specifications (ASTM)

ASTM C 1629, Section 6.4 – Hard Body Impact, tested to level 3 compliance.

ASTM C 1629, D 4977 – Surface Abrasion, tested to level 3 compliance.

ASTM C 1629, D 5420 – Indentation, tested to level 3 compliance.

ASTM D 2197 – Hoffman Scratch, tested to 10kg max load.

ASTM D 3273 – Mold and Mildew Resistant

ASTM G21/G22 – Fungal and Bacteria Resistant

* + - 1. SUBMITTALS
				1. Product Data: Submit sufficient manufacturer's data to indicate compliance with these specifications, including:

Preparation instructions and recommendations.

Storage and handling requirements and recommendations.

Installation methods.

* + - * 1. Shop Drawings: Submit elevations of each wall showing location of paneling and trim members with respect to all discontinuities in the wall elevation.
				2. Selection Samples: Submit sample of required color or pattern selected by architect.
				3. Samples for Verification: Submit appropriate section of panel for each finish selected indicating the color / print and finish required.

Submit complete with specified applied finish.

Exposed Molding and Trim: Provide samples of each type, finish, and color.

* + - * 1. Manufacturers Material Safety Data Sheets (MSDS) for adhesives, sealants and other pertinent materials prior to their delivery.
			1. QUALITY ASSURANCE
				1. Conform to building code requirements for interior finish for smoke and flame spread requirements as tested in accordance with:

ASTM E 84 (Method of test for surface burning characteristics of building Materials)

Wall Required Rating – Class [A] or [C].

Include the following if products are used in areas subject to stringent wash down requirements.

* + - * 1. Sanitary Standards: System components and finishes to comply with:

United States Department of Agriculture (USDA) / Food Safety & Inspection Services (FSIS) requirements for food preparation facilities, incidental contact.

Food and Drug Administration (FDA) 2013 Food Code 6-101.11.

Canadian Food Inspection Agency (CFIA) requirements.

* + - 1. DELIVERY, STORAGE AND HANDLING
				1. Deliver materials factory packaged on strong pallets.
				2. Store panels and trim lying flat, under cover and protected from the elements. Allow panels to acclimate to room temperature (range of 60 to 75°F) for 48 hours prior to installation.
			2. PROJECT CONDITIONS
				1. Environmental Limitations: Buildings are to be fully enclosed prior to installation with sufficient heat (70°) and ventilation consistent with good working conditions for finish work
				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.

Provide ventilation to disperse fumes during application of adhesive as recommended by the adhesive manufacturer.

* + - 1. WARRANTY
				1. Furnish three-year guarantee against defects in material and workmanship.
1. PRODUCTS
	* + 1. ACCEPTABLE MANUFACTURER
				1. FRP Wall Panels Basis-of-Design: Marlite Artizan™ Max Digitally Printed FRP manufactured by Marlite, [www.marlite.com](http://www.marlite.com). For questions or clarification, contact Marli Harrison at 800.377.1221 or email: marketing@marlite.com.
				2. The Architect will consider products of comparable manufacturers as a substitution, pending the contractor’s submission of complete details and documentation of the substitution in accordance with procedures in Division 01 of the Project Manual. Requests for alternates must be submitted a minimum of 10 days prior to bid. Documentation shall include a list of five similar projects of equivalent size where products have been installed for a minimum of two years.
			2. PANELS
				1. Fiberglass reinforced thermosetting polyester resin panel sheets complying with ASTM D 5319.

Finishing:

Digital printing resolution up to 1,000 dots per square inch (DPI) and 8 picolitre dot size with aluminum-oxide and ceramic roll-applied topcoat using controlled, low-temperature inline curing. Coatings are water-based UV cured, and ink is free of VOC.

Dimensions:

Thickness – 0.090” (2.29mm) nominal

As indicated on drawings*Induro FRP Panels are not available in lengths exceeding 8’ (2.4m).*

Tolerance:

Length and Width: +/-1/8” (3.175mm)

Marlite’s Artizan™ Max FRP panels are factory precision square-cut on all four sides and not to exceed 1/8 “ for 8 foot (2.4m) panels

Testing Properties:

Must meet all standards as listed in Paragraph 1.3.A.

* + - * 1. Finishes and Graphical Design:

Choose from Options 1, 2, or 3

Artizan™ Max FRP digital printing standard Collections.

Finish and Color: Collections can be found at [**https://marlite.com/wall-panels/visual-wall-panels/artizan-max**](https://marlite.com/wall-panels/visual-wall-panels/artizan-max)

Artizan™ Max FRP digital printing custom finishes as submitted by designer to replicate natural materials such as granite, stone, brick, aged wood, cement, and more.

Contact a Marlite representative for details.

Artizan™ Max FRP digital printing for custom graphics, pictures, or designs:

Submitted custom graphics must be of a high enough resolution and be verified by Marlite to meet combability with layout, size and panel dimensions for proper insulation.

* + - * 1. Surface Finish:

Smooth Surface.

* + - * 1. Fire Rating:

Class [A] or [C] Fire Rating.

Delete the following if resilient or contractor supplied bases are used.

* + - 1. BASE
				1. Marlite M600 series Base Molding for 0.090” (2.29mm) thick FRP Panels

Color: [Black] or [Quarry Red].

* + - 1. MOLDINGS
				1. Division Molding:

Marlite’s Artizan™ Max FRP panels are factory precision square-cut on all four sides. Division molding is not needed unless specifically required by the architect.

Choose from Options 1, 2, or 3.

* + - * 1. Inside, Outside, and Edge Molding:

Aluminum Anodized Trim: Heavy weight extruded aluminum 6063-T5 alloy prefinished at the factory.

Color: manufacturer’s standard [Brite Satin Anodized] or [Black Satin Anodized]

Aluminum Harmonizing Trim: Heavy weight extruded aluminum 6063-T5 alloy prefinished at the factory. Corners and edge finish to complete system.

Color: Factory cured custom color to harmonize with panel design

PVC Trim: Thin-wall semi-rigid extruded PVC.

Color: Select from Manufacturer’s Standards

Choose from Options 1 or 2

* + - * 1. Corner Guard:

F 560SS #4 Brushed Satin Stainless Corner Guard

M 961 PVC Corner Guard

Color: Select from Manufacturer’s Standards

* + - 1. Accessories

Specify rivets for use in areas with dramatic changes in temperature and/or humidity, where the substrate is unusually uneven, and in all low temperatures or cold storage applications.

* + - * 1. Adhesives Available Required by Substrate:

Marlite C-551 FRP Adhesive - Water- resistant, non-flammable adhesive for use over porous surfaces such as unfinished drywall or plywood.

Marlite C-915 Construction Adhesive - Flexible, water-resistant, solvent based adhesive, formulated for fast, easy application.

Titebond® Advanced Polymer Panel Adhesive – VOC compliant, non-flammable, environmentally safe adhesive, for use over non-porous surfaces such as finished drywall, ceramic tile, block wall or existing FRP.

* + - * 1. Sealant:

Choose from Options 1, 2, or 3

Marlite Brand MS-250 Clear Silicone Sealant.

Marlite Brand MS-251 White Silicone Sealant.

Marlite Brand - Color Match Sealant.

1. EXECUTION
	* + 1. PREPARATION
				1. Examine areas and conditions, with Installer present, to ensure compliance that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface. If conditions are not acceptable, inform the General Contractor immediately in writing.

Verify that stud spacing does not exceed 24” (61cm) on-center.

Level wall surfaces to panel manufacturer’s requirements. Remove protrusions and fill indentations.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
			1. INSTALLATION
				1. Comply with manufacturer's recommended procedures and installation sequence.
				2. Cut sheets to meet supports allowing 1/8” (3 mm) clearance for every 8 feet (2.4m) of panel.

Cut and drill with carbide tipped saw blades or drill bits or cut with shears.

* + - * 1. Apply panels to board substrate, above base, vertically oriented with seams plumb and pattern aligned with adjoining panels.

Install panels with manufacturers’ recommended gap for panel field and corner joints.

Adhesive trowel and application method to conform to adhesive manufacturer’s recommendations.

* + - * 1. Apply panel moldings to all panel edges using silicone sealant providing for required clearances.

All moldings must provide for a minimum 1/8” (3mm) of panel expansion at joints and edges, to ensure proper installation.

For high moisture applications, apply sealant to all moldings, channels and joints between the system and different materials to ensure watertight installation.

* + - 1. CLEANING
				1. Remove excess adhesive and sealant from panels and molding immediately. Wipe panel down using a damp cloth and mild soap solution or cleaner.
				2. Refer to manufacturer's specific cleaning recommendations. Do not use abrasive cleaners.

**END OF SECTION**