

INDUSTRIAL FRP PANEL SPECIFICATION FORM

Part 1 - GENERAL

1.01 Description of Work

This specification is intended to cover all Fiberglass Reinforced Plastic (FRP) roofing and wall/siding panels, fasteners, sealants, and closures.

1.02 Quality

Kemlite Industrial FRP Building Systems panels establish a minimum level of quality required.

1.03 Product Substitutions

All product substitutions must meet the minimum performance and quality standards specified. Applications for product substitution must include the following: technical information along with test data, samples, and all information required for evaluation.

Part 2 - PRODUCTS

2.01 Materials and Finishes

Roofing and siding panels shall be manufactured by Kemlite Company, Inc. and to the following specifications:

2.01.01 Resin

Resin shall be premium grade, chemically resistant, and one of the following:

- A. Isophthalic Fire Rated Polyester
- B. Non-Fire Rated Polyester

2.01.02 Glass Reinforcement

Reinforcement shall be one of the following:

- A. Combination of bidirectional woven roving and chopped strand fiberglass
- B. Multidirectional chopped strand fiberglass

2.01.03 Flame Spread

Fire rated FRP Panels shall have a Class A flame spread rating of 25 or less when tested in accordance with ASTM E-84.

2.01.04 UV Resistance

FRP Panels shall be made from UV stabilized resin modified with acrylic monomers. As an

option, additional UV resistance shall come from surfacing mats and a surface coating such as Gel-Coat.

2.01.05 Color

Color to be chosen by owner.

2.01.06 Flashing and Trim

Accessories shall be of thickness, dimensions, and profile required for complete installation of panels.

2.01.07 Structural Fasteners with Sealing Washers

Fasteners shall be 300 series stainless steel, spaced and installed per manufacturer's recommendations.

2.01.08 Side Lap Fasteners

SB2 side lap fasteners installed per manufacturer's recommendations.

2.01.09 Closures and Sealants

The following accessories shall be installed per manufacturer's recommendations.

- A. Opaque Sealant - Butyl Tape
- B. Clear Sealant - Silicone
- C. EPDM Closures with matching profile

2.02 Performance Criteria

Structural performance criteria shall be determined in accordance with Standard Specification for Glass-Fiber-Reinforced Polyester Plastic Panels ASTM D 3841.

2.02.01 Loads

- A. Roofing

_____ psf live load

_____ psf positive wind load

_____ psf negative wind load

- B. Siding

_____ psf positive wind load

_____ psf negative wind load

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2.02.02 Allowable Deflections

- A. Roofing Live Load: L/D = 40
- B. Roofing/Siding Wind Load: L/D = 20

2.02.03 Factors of Safety

- A. Roofing Live Load: F.O.S.= 2.5
- B. Roofing/Siding Wind Load: F.O.S.= 1.88

Part 3 - EXECUTION

3.01 Storage and Handling

3.01.01 Storage

Store panels under a ventilated cover and keep dry. Stack panels off ground with one end elevated to allow draining of trapped moisture between panels.

3.01.02 Handling

Protect the surface of FRP panels from cuts, scratches, gouges, abrasions, and impacts. Use spreader bars when lifting FRP. Do not use wire slings unless material is protected.

3.02 Installation

3.02.01 Preparation

- A. Supports must be aligned and bearing surfaces of panels cleaned before placing panels.
- B. After placing supports adjust panels to final position with proper bearing and alignment of joints, laps, and supports before fastening.

3.02.02 Fastening

- A. Pilot holes must be drilled in supports and panels for Type A and B stainless steel self-tapping screws at drill speeds of 500 RPM or less. Pilot holes in supports should be sized as recommended by the fastener manufacturer.
- B. Fastener spacing as recommended by panel manufacturer.
- C. Locate holes no less than 1-1/2" from edge of panel.
- D. Completely support sheets at perimeter.
- E. Install screws with a power tool equipped with a variable torque slip clutch at 500 RPM or less.
- F. Mark and drill holes for side lap fasteners in overlapped pieces.

- G. Fasten panels using specified fasteners with sealing washers.
- H. Install side lap fasteners in overlapped pieces.
- I. Install flashings with grommet type fasteners.
- J. Insert closure strips and secure them with adhesive caulking.
- K. End laps for siding panels shall be 4 inches minimum. End laps for roofing panels shall be 6 inches minimum.

3.02.03 Cutting

- A. Cut or hand saw panels using abrasive discs or fine tooth blades.
- B. Firmly clamp panels to a cutting table close to saw line.
- C. Saw operators shall wear dust-filter masks and safety glasses.