



## PILEFORM™ F

### FRP Bridge and Marine Protection and Rehabilitation Jackets

#### DESCRIPTION

Five Star® PileForm™ F fiberglass reinforced plastic (FRP) bridge and marine protection and rehabilitation jackets meet and exceed marine engineering specifications for use in hostile marine environments where exposure to ice, floating debris, chemical pollution, oils, acids, salt water, and tidal action may occur. Five Star® PileForm™ F jackets are available in translucent or other pigmented and gel coated options. All PileForm F jackets now have an Integral Fastener Template (IFT) to help ensure proper fastener installation. Five Star® PileForm F jackets are part of the Five Star Bridge and Marine system including PileForm F jackets, LPL-HF Epoxy Grout, Underwater High Strength Cementitious Grout, and Splash Zone Compound.

#### USES

- Used around timber, steel or concrete piles
- Available in permanent reusable varieties that can be assembled topside or in the water

#### ADVANTAGES

- Easy installation including Integral Fastener Template (IFT)
- Lightweight for easy maneuvering by divers
- Non-corrosive
- High strength
- Excellent solvent and chemical resistance
- High abrasion and impact resistance

#### SIZING & CONFIGURATION

Five Star® PileForm™ F jackets are available in lengths of 10 to 25 feet (3.0 to 7.6 m) with custom lengths available and with nominal and minimum wall thicknesses of 1/8 inch (0.32 cm) to 1/2 inch (1.27 cm). Custom sizes are also available. Consult Five Star® for further details.

Typical Properties	
<b>Flexural Strength</b> , ASTM D 790	34,000 psi (230 MPa)
<b>Flexural Modulus</b> , ASTM D 790	1.0 x 10 <sup>6</sup> psi (6.9 GPa or 6,900 MPa)
<b>Ultimate Tensile Strength</b> , ASTM D 638	20,000 psi (137.9 MPa)
<b>Tensile Modulus</b> , ASTM C 638	1.5 x 10 <sup>6</sup> psi (10,342.1 MPa)
<b>Elongation</b> , ASTM D 638	1.6%
<b>Izod Impact (Notched)</b> , ASTM D 256	20 ft lbs/inch
<b>Barcol Hardness</b> , ASTM D 2583	40-50
<b>Water Absorption</b> , ASTM D 570	< 0.3%
Standard Color	Translucent
Wall Thicknesses (nominal and minimum)	1/8" to 1/2"
<b>UV Resistance, Carbon Arc Weathering</b> , ASTM G153-04	
500 Hours	Pass (No Detrimental Effect)

*The data shown above reflects typical results based on testing at 1/8" nominal thickness. Variations from the data shown may occur at other thicknesses.*

## INSTALLATION GUIDELINES

### SURFACE PREPARATION:

Concrete, steel, or timber piles must be thoroughly clean and sound prior to installation of Five Star® PileForm™ F fiberglass reinforced plastic (FRP) jackets. Clean existing pilings using a minimum of 4,000 psi high-pressure washer or other mechanical means of clearing pile caps of marine growth, rust, scaling, and other contaminants.

### PLACEMENT:

Five Star® PileForm™ F jackets may be of one or two-piece construction. Place PileForm™ F pile jackets to desired elevation and secure. Apply epoxy gel to all vertical or horizontal seams and secure using stainless steel self-tapping/drilling screws if joining more than one section. Five Star's Integral Fastener Template (IFT) on the tongue and groove closures helps ensure proper fastener installation for contractor and site QC. Establish a suitable bottom seal for jacket that will withstand the pressures developed during the placement or pumping of filler material. Bottom seal may be closed foam, oakum and expanding resin or other appropriate material. Once the end is sealed, begin filling the pile jackets with repair material using one of two methods.

1. Use a pressure pump and start pumping from the bottom via pumping ports. Space evenly and move from one end to the other as the jacket fills.
2. Use the pour method by pouring the material from the top of the jacket starting at one end and moving to the other. In many cases pouring from both sides is used to ensure even filling.

Continue filling the jackets until repair material reaches within 1 inch (2.54 cm) of the tops and then stop.

Note: Larger jackets may require external bracing and strapping on the outside of the jacket to prevent bulging during placement of filler material into jacket. Place strapping system every 16 inches (40.64 cm) or as required by the engineer along jacket length.

After the initial set of the repair material, fill the remaining 1 inch (2.54 cm) with a Five Star® epoxy or cementitious grout product. This will help seal the top of the jackets mitigating water from getting between jackets and fill, or pile cap and fill, to help prevent any problems as a result of the freeze/thaw cycle. Then, using Five Star® Splash Zone Compound, create a 45° bevel from the top of the filled jackets to the existing piles. This will create a run-off to help ensure no water gets trapped on the tops of the jackets.

For additional Installation instructions, please refer to Five Star® PileForm™ F Installation Guide or call Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

SKU / PRODUCT CODE	DESCRIPTION	UNIT SIZE
32509	Square, Single Piece, Tongue and Groove, Translucent, 3/16", SLS	Call
32527	Square, Single Piece, Tongue and Groove, Translucent, 1/8", SLS	Call
32510	Round, Single Piece, Tongue and Groove, Translucent, 3/16", SLS	Call
32528	Round, Single Piece, Tongue and Groove, Translucent, 1/8", SLS	Call
32511	Rectangle, Single Piece, Tongue and Groove, Translucent, SLS	Call
32512	Octagon, Single Piece, Tongue and Groove, Translucent, SLS	Call
32513	Hexagon, Single Piece, Tongue and Groove, Translucent, SLS	Call
32514	H-Beam, Single Piece, Tongue and Groove, Translucent, SLS	Call
32515	T-Beam, Single Piece, Tongue and Groove, Translucent, SLS	Call

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Specifications Subject to Change.

For most current version of datasheet, go to [FiveStarProducts.com](http://FiveStarProducts.com)

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