



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. Five Star® PileForm™ F jackets are part of the Five Star® Marine Encapsulation Systems including Five Star® High Flow Pile Jacket Epoxy Grout LPL-HF, Five Star® Cementitious Underwater High Strength Grout, and Five Star® Splash Zone Compound.

ADVANTAGES

- Easily customizable to fit your needs
- Available in a variety of gel coat colors
- Easy installation
- Lightweight for easy maneuvering by divers
- Non-corrosive
- High strength
- Excellent solvent and chemical resistance
- High abrasion and impact resistance

USES

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

SIZING & CONFIGURATION

Five Star® PileForm™ F jackets are available in standard lengths up to 25 feet (.6 m) with custom lengths available up to 53 feet (16 m) and with nominal and minimum wall thicknesses of 1/8 inch (3 mm) to 1/2 inch (13 mm). Custom diameters are also available.

TYPICAL PROPERTIES - 1/8" MINIMUM THICKNESS	
Flexural Strength , ASTM D 790	34,000 psi (230 MPa)
Flexural Modulus , ASTM D 790	1.0 x 10 ⁶ psi (6.9 GPa or 6,900 MPa)
Ultimate Tensile Strength , ASTM D 638	20,000 psi (138 MPa)
Tensile Modulus , ASTM C 638	1.5 x 10 ⁶ psi (10,300 MPa)
Compressive Strength , ASTM D695	18,500 psi (128 MPa)
Elongation , ASTM D 638	1.6%
Izod Impact (Notched), ASTM D 256	20 ft lbs/inch (1.07 kg/m)
Barcol Hardness , ASTM D 2583	40-50
Water Absorption , ASTM D 570	< 0.3%
Standard Color	Translucent
Wall Thicknesses (nominal and minimum)	1/8" to 1/2" (3 - 13 mm)
UV Resistance, Carbon Arc Weathering , 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

1. 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.

2. PLACEMENT

Five Star® PileForm™ F jackets may be of one or two-piece construction and vertically stackable. 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. 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 complete step-by-step installation instructions, refer to Five Star® PileForm™ F Installation Guide. For further questions, or if additional information is required, contact your local Five Star® Technical Sales Representative at 1-800-243-2206.

SKU / PRODUCT CODE

Numerous standard sizes available. Call Five Star Products.

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Specifications Subject to Change.

For most current version of datasheet, go to FiveStarProducts.com

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