Material Performance Specification
Five Star®PileForm™ F
FRP Protection & Rehabilitation Jackets

A. The pile jacket shall consist of fiberglass mats woven in a polyester resin matrix. Wall thickness of jacket shall be ⅛ inch (3 mm) nominal (+/- manufacturing tolerances) unless otherwise specified.

B. The manufacturer shall have a minimum of 10 year's experience in the manufacture of fiberglass pile jackets. The manufacturer shall offer technical services and provide a representative at the jobsite upon request with sufficient notice (5 working days).

C. The fiberglass jacket shall meet all the following typical performance criteria: [1]

1.	**Flexural Strength**, ASTM D790	34,000 psi (230 MPa)
2.	**Flexural Modulus,** ASTM D790	1.0 x 10^6 psi (6.9 GPa or 6,900 MPa)
3.	**Ultimate Tensile Strength,** ASTM D638	20,000 psi (138 MPa)
4.	**Tensile Modulus**, ASTM D638	1.5 x 10^6 psi (10,300 MPa)
5.	**Compressive Strength,** ASTM D695	18,500 psi (128 MPa)
6.	**Elongation**, ASTM D638	1.6%
7.	**Izod Impact (Notched),** ASTM D256	20 ft lbs/inch (1.07 kJ/m)
8.	**Barcol Hardness,** ASTM D2583	40-50
9.	**Water Absorption,** ASTM D570	< 0.3%
10.	**Standard Color**	Translucent
11.	**Wall Thicknesses** (nominal and minimum)	⅛" to ½" (3 mm to 13 mm)
12.	**UV Resistance, Carbon Arc Weathering,** ASTM G153, 500 hours	Pass (No Detrimental Effect)

An acceptable product which meets these criteria is: **Five Star® PileForm F™ Pile Jacket** as manufactured by Five Star Products, Inc., Shelton, CT [203-336-7900].

D. The pile jacket shall be installed in accordance with the pile jacket manufacturer's installation instructions. Any deviations to the pile manufacturer's handling and/or installation instructions that are required shall be approved in advance by the project engineer and/or the project manager.

[1] *The data shown above reflect typical results based on ⅛ inch minimum thickness in laboratory testing under controlled conditions. Reasonable variations from the data shown above may result in the field. Test methods are modified where applicable.*

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