



Product Data Sheet

MarineSeal Series

500 FRP Outer Cover

An integral component of the UCC MarineSeal Series 500FRP Outer Cover System, providing long term strengthening for degraded timber piling in marine environments.

Description	UCC MarineSeal fiberglass reinforced plastic FRP pile 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 where tidal action may occur. UCC MarineSeal FRP jackets are available in translucent or may be gel coated to any specified color.
Uses	UCC MarineSeal FRP jackets can be used around timber, steel or concrete piles. UCC MarineSeal FRP is available in permanent and reusable varieties that can be assembled topside or in the water.
Features	<ul style="list-style-type: none"> - Easy Installation. - Lightweight for Easy Maneuvering by Divers. - Non-Corrosive. - High Strength. - Excellent Solvent and Chemical Resistance. - High Abrasion and Impact Resistance.
Application	UCC MarineSeal FRP jackets are available in lengths of 1' to 20' (feet) with wall thicknesses of 1/8 inch to 1/2 inch. Custom sizes are also available. Consult UCC for further details.

Properties	
Flexural Strength, ASTM D 790	34,000 psi
Flexural Modulus, ASTM D 790	1.0 x 10 ⁶ psi
Ultimate Tensile Strength, ASTM D 638	20,000 psi
Tensile Modulus, ASTM C 638	1.5 x 10 ⁶ psi
Elongation, ASTM D 638	1.6%
Izod Impact (Notched), ASTM D 256	20 ft lbs/inch
Barcol Hardness, ASTM D 2583	40-50
Water Absorption, ASTM D 570	< 0.3%
Standard Color	Translucent
Wall Thickness	1/8" to 1/2"
UV Resistance, Carbon Arc Weathering, ASTM G153-04 500 Hours	Pass (No Detrimental Effect)



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SURFACE PREPARATION:

Concrete, steel, or timber piles must be thoroughly clean and sound prior to installation of UCC MarineSeal 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:

UCC MarineSeal FRP jackets may be of one or two-piece construction. Place UCC MarineSeal FRP 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 UCC MarineSeal FRP 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 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 18 to 24 inches along jacket length.)

After the initial set of the repair material, fill the remaining 1 inch with MarineSeal UW Grout or MarineSeal 311 Epoxy Grout. This will seal the top of the jackets preventing any water from getting between jackets and fill or pile cap and fill and will prevent any problems as a result of the freeze thaw cycle.

SKU / PRODUCT CODE	DESCRIPTION	UNIT WEIGHT
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

WARRANTY: "UCC PRODUCTS ARE MANUFACTURED TO BE FREE OF MANUFACTURING DEFECTS AND TO MEET UCC'S CURRENT PUBLISHED PHYSICAL PROPERTIES WHEN APPLIED IN ACCORDANCE WITH UCC'S DIRECTIONS AND TESTED IN ACCORDANCE WITH ASTM AND UCC STANDARDS. HOWEVER, SHOULD THERE BE DEFECTS OF MANUFACTURING OF ANY KIND, THE SOLE RIGHT OF THE USER WILL BE TO RETURN ALL MATERIALS ALLEGED TO BE DEFECTIVE, FREIGHT PREPAID TO UCC, FOR REPLACEMENT. THERE ARE NO OTHER WARRANTIES BY UCC OF ANY NATURE WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. UCC SHALL NOT BE LIABLE FOR DAMAGES OF ANY SORT, INCLUDING PUNITIVE, ACTUAL, REMOTE, OR CONSEQUENTIAL DAMAGES, RESULTING FROM ANY CLAIMS OF BREACH OF CONTRACT, BREACH OF ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR FROM ANY OTHER CAUSE WHATSOEVER. UCC SHALL ALSO NOT BE RESPONSIBLE FOR USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT HELD BY OTHERS."



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