

FRP Saturant 200

High-Strength, Composite Saturating Resin

Description

Advanced FRP Systems' **FRP Saturant 200** is a was engineered to provide both extremely strong and resilient composites with carbon fiber, glass fiber and other reinforcing fibers. This low-viscosity epoxy will quickly and easily wet out fiber mats and providing outstanding adhesion to the substrates. Composites made with **FRP Saturant 200** have excellent chemical, thermal shock and corrosion resistance. Carbon fiber composites provide over 10 times the strength-to-weight ratio of steel.

Product Advantages

- Zero VOC system
- Outstanding adhesion to concrete, steel, masonry, wood and composites
- Ambient cure, high strength formulation
- Excellent chemical resistance
- Max Operating Temp. 175 °F
- Ships DOT Non-Corrosive
- Moisture Tolerant epoxy
- Excellent Thermal Shock resistance
- Cures at temperatures as low as 40 °F

Suggested Application

Used as a high strength saturating resin for carbon, glass, or Kevlar fiber reinforcing fabrics. Composite reinforcements are excellent for repairing damaged pipes, rebuilding pressure vessels and tanks, reinforcing concrete, masonry and wood or any application requiring a thin, lightweight structural repair.

Performance Data

Unreinforced Resin

	Test Method	Results
Flexural Strength	ASTM D790	18,200 psi
Flexural Modulus	ASTM D790	447 ksi
Tensile Strength	ASTM D638	11,000 psi
Tensile Modulus	ASTM D638	491 ksi
Compressive Strength	ASTM D695	15,600 psi
Adhesion to Concrete	ASTM D4541	>750 psi
Adhesion to Steel	ASTM D4541	3,000 psi
Heat Distortion Temperature	ASTM D648	201 °F
Maximum Operating Temp.		175 °F

Product Characteristics

Finish: High Gloss

Color: Amber Liquid

Volume Solids: 100%

Mix Ratio (by wt.): 1.6:1

Mix Ratio (by vol.): 1.5:1

Density: 1.10 g/mL

Approx. Coverage: 70 sqft/gallon with CF-500 BD

Maximum Film Build: N/A

Working Time: 50 at 75 °F

Application Temperatures: 40 - 105 °F

FRP Saturant 200 is sold in 1/2, 1, 2, and 4 gallon units. Other unit sizes may be available.

Sold FOB Weymouth, MA

Cure Schedule

Cures for Application	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Dry to Touch	14 hours	8 hours	4 hours
Dry Hard	36 hours	24 hours	12 hours
Overcoat Window	14 - 168 hours	8 - 120 hours	4 - 120 hours
Cures for Service	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Handling	36 hours	24 hours	12 hours
Return to Service	48 hours	36 hours	24 hours
Full Mechanical Strength	168 hours	120 hours	72 hours

Contact Advanced FRP Systems for Elevated temperature post-cure information. Elevated temperature cures will increase chemical resistance and reduce return to service time.

Application Information

All Advanced FRP Systems products should be installed by a certified applicator or with direct oversight by Advanced FRP Systems, Inc. This data sheet provides general application guidelines for FRP Saturant 200.

Contact Advanced FRP Systems for more information if your project has detailed coating specifications.

Ensure air and substrate temperatures are between 40 - 105 °F and relative humidity is below 95%. Follow surface preparation guidelines below prior to coating.

Prior to applying composite reinforcement, the surface to be reinforced must be smooth and free of pits, voids, or other imperfections. Repair and rebuild damaged substrates with **Advanced FRP Repair Putty** or **FRP Tack Coat 100**.

Pour all of Part A – Hardener into Part B – Base and mix with low speed power agitator for 2-3 minutes. Using a paint stick or spatula, thoroughly scrape sides and bottom of unit. Mix with power mixer for an additional 2 minutes. Do not dilute Advanced FRP products.

Ensure surface is properly prepared and vertical and overhead areas have **FRP Tack Coat 100** applied as directed.

Wet Lay-up Method: Apply a thin coat of **FRP Saturant 200** onto the saturation table. Unroll the precut lengths of reinforcement fabric onto a saturation table. Pour some of the saturating resin onto the fabric and spread with a plastic applicator or roller. Continue to pour more saturant on until it won't absorb into the fabric. Roll the fabric onto an application roll. The saturated fabric can now be applied onto the substrate. It is critical to work out air bubbles trapped behind the fabric by hand or with a fiberglass roller. Work out air bubbles prior to adding additional layers of reinforcement fabric.

Surface Preparation

Steel (Immersion Service): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe prior to blasting. Abrasive Blast to an SSPC-SP 10 Near white metal blast with a sharp angular profile of 2 – 3 mils (50 – 75 microns).

Steel (Atmospheric Corrosion): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe. Minimum surface preparation of SSPC-SP 2 Hand Tool Cleaning must be performed. For enhanced performance, an SSPC-SP 6 Commercial Blast Cleaning with an angular surface profile of 1.5+ mils should be used.

Concrete (Immersion/Secondary Containment): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. Surface should be thoroughly cleaned and dry. Concrete and mortar must be cured at least 28 days @ 75 °F. Surface must be free of laitance, concrete dust, dirt, form release, curing aids and other foreign material. **Advanced FRP Sealer 200** should be applied prior to coating at 3-5 mils to increase adhesion and reduce outgassing.

Concrete (Atmospheric Corrosion): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. **Advanced FRP Sealer 200** is not required but recommended for improved adhesion and aesthetics.

Previously Coated Surfaces: Consult with Advanced FRP to ensure previous coating is compatible. If compatible and previous coating is in good condition, remove all loose coating and foreign materials. Brush blast or grind all glossy areas to a uniform dull finish. Remove dust, oil and debris with SSPC-SP 1 Solvent Wipe prior to coating.

Storage and Shelf Life

FRP Saturant 200 must be stored between 45 – 110 °F, out of direct sunlight. If stored in these conditions, the product will have a 24-month shelf life.

Safety Precautions

Please consult up-to-date Safety Data Sheets (SDS's) prior to use. An SDS should be available on site whenever Advanced FRP products are being used.

Warranty Information

Advanced FRP Systems, Inc. warrants that our products are free of manufacturing defects in accordance with applicable Advanced FRP quality control parameters. Liability for products proven defective, if any, is limited to replacement of defective product or refund of purchase price as determined by Advanced FRP Systems. Additional warranties and protection are available. Contact Advanced FRP for more information.

Disclaimer

The information and recommendations set forth upon this data sheet are based on years of laboratory and field analysis. This information is intended to be used as guidance only as many factors affect the performance of polymeric systems. Actual exposure conditions are the best test of suitability and Advanced FRP Systems will generally provide complimentary samples for field testing.

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