OmegaWrap C System

The OmegaWrap-C system is a hoop dominant carbon-epoxy solution designed for general purpose pipe repair. The system is available as a kit and includes mixing supplies, Carbon reinforcing fabric, load transfer material and an epoxy saturant. Our load transfer material is mixed on-site and is used to fill voids prior to wrapping. The epoxy saturant is used to wet out the fabric on-site and does not require any specialized tools.

Applications:

- Cracks after buffing
- External corrosion and pitting
- Dents, gouges, or scratches
- Welds

Mechanical Properties

Property	Details	Test Standard	Test Results
Tensile Strength	Hoop	ASTM D3039	143,640 psi
Ultimate Tensile Strain			1.31%
Modulus			10,990,000 psi
Tensile Strength	Axial	ASTM D3039	17,250 psi
Ultimate Tensile Strain			0.85%
Modulus			2,030,000 psi
Poisson's Ratio	Laminate	ASTM D3039	0.266
Hardness (Barcol)		ASTM D2583	57
Coefficient of Thermal Expansion	Hoop	ASTM D5335	5.24 x 10-6 in/in/°C
	Axial		0.22 x 10-6 in/in/°C
Glass Transition Temperature	Epoxy Saturant	ASTM E1356	181.9°F
	Load Transfer Material		324.4°F
Lap Shear Strength	Epoxy Saturant On Steel	ASTM D5865	3,300 psi
Compressive Modulus	Load Transfer Material	ASTM D695	6,400 psi
Compressive Strength			296,200 psi
Cathodic Disbondment	30 Day Test, Average Radius	ASTM G95	Completed
Spool Survival	P_{test}=3,242 psig	ASME PCC-2	Pass
Long-Term Design Strength	P_{test}=3,300 psig	ASME PCC-2	56,483 psi

Application Properties

Property	Value
Supplied Width	12 in
Fabric Orientation	Biaxial, hoop dominant
Cured Ply Thickness	0.022 in
Maximum Service Temperature with Ambient Cure	146°F
Shelf Life	2 years
Epoxy Saturant Working Time	60 mins
Load Transfer Material Working Time	20 mins
Application Conditions	50°F up to 146°F

Load transfer putty and saturating resin must be stored in a dry area with temperatures between 41°F (5°C) and 104°F (40°C).

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