

SYNTHO-GLOSS[®] XT

EXTREME STRENGTH FIBERGLASS COMPOSITE SYSTEM



Description

Syntho-Glass[®] XT system is a unique pre-impregnated, bi-directional composite used to repair and reinforce both internal and external corrosion on pipelines or structures. Our pre-preg system ensures proper fiber-to-resin content ratios which are crucial to reliable performance. This operator qualified engineered system was designed to conform to and recognized by ASME PCC-2, ASME B31, ISO TS24817, DOT, API, and CSA Z662 standards for nonmetallic reinforcing solutions, thus ensuring product application integrity. This extreme strength design minimizes the time and cost of refurbishment by reducing the time to repair, as well as the replacement cost. When used with the appropriate primary coating, Syntho-Glass XT enables one to repair and reinforce virtually any geometry in minutes.

Mechanical Properties

Test	Method	Result
Tensile Strength	ASTM D3039	Hoop: 54,000 psi (3,724.0 bar) Axial: 34,000 psi (2,344.8 bar)
Hardness, Shore D @ 75°F (24°C)	ASTM D2240	83
Flexural Strength	ASTM D790	58,680 psi (4,046.8 bar)
In-Plane Shear Strength	ASTM D5379	7,520 psi (518.6 bar)
CTE	ASTM D648	Hoop: CTLE: 1.06E-05 inches/inches/°F
Lap Shear	ASTM D3163	1,782 psi (122.9 bar)



Typical Applications

- Pipeline Integrity
- Transmission and distribution pipelines
- Oil and gas risers
- Girth welds on vessels and pipelines
- Straights, elbows, tees, and flanges
- Process piping: chemicals, oil, gases, water, and steam
- Atmospheric corrosion

Benefits

- Water-activated polyurethane resin reduces composite preparation time by over 50%
- Installation in wet, rainy, or submerged environments ensures ease of application in virtually any situation
- Simplicity and flexibility permit application to irregular shapes and geometries while eliminating diameter specific inventory
- Full factory engineering consultation and support, ensuring safe and successful repairs

Physical Properties

VOCs: None

Working Time: 30 Minutes @ 75°F (24°C)

Set Time: 2 Hours @ 75°F (24°C)

Resin Type:

Water-activated, polyurethane

Resin Application:

Micro-controlled, Pre-impregnated

Service Temperature:

-50° to 194°F (-46° to 90°C)

Application Temperature:

-32° to 150°F (-18° to 65°C)

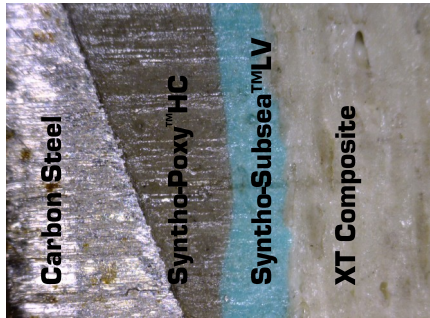
Shelf Life: 12 Months with recommended storage conditions





Syntho-Glass XT System Components:

- Syntho-Poxy™HC: Reinforcing Load Transfer Epoxy
- Syntho-Subsea™LV: Kevlar® Reinforced Epoxy
- Syntho-Glass®UV: UV Protectant Coating
- Applicator Toolbox: Compression film, film perforation tool, additional protective gloves, and epoxy applicator tools



Syntho-Subsea LV Epoxy Data

Test	Result
Tensile Strength	6,000 psi (413.68 bar)
Compression Strength	7,380 psi (508.83 bar)
Flexural Strength	4,550 psi (313.71 bar)
Flexural Modulus	142,188 psi (9,803.51 bar)
Lap Shear Strength	1,782 psi (122.86 bar)
Abrasion Resistance	34.0 mg/1,000 cycles (CS17 wheels with 1,000 gram weights)

Temperature	Result
Service Temperature: Dry Applications	-50° to 275°F (-45° to 135°C)
Service Temperature: Wet Applications	-50° to 160°F (-45° to 71°C)

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