

Fiercely strong.

Our Wrap is a professional engineering designed carbon fiber wrap, with a two-part epoxy resin. Our carbon fiber kits reinforce piping and vessels to their designed strength, to prevent unplanned outages and prolong the lifespan of your equipment.

The kits are premeasured and packaged in an easy-to-use form, to prevent mistakes in the field, and allow for easy to handle and install portions. The standardized kits come in widths of 2", 4" and 6" material. An engineered package will be designed for your unique application with a total number of kits that should be used to perform the repair.

WRAP HAS BEEN INDEPENDENTLY TESTED BY THIRD-PARTY LABORATORIES.

The kits are resistant to many industrial chemicals such as deionized water, methanol, ethanol, toluene, xylene, hydrogen sulfide, various acid solutions, various chlorine solutions and trichloroethane. For technical information on your specific application, please contact your sales professional for a formal quote.

TEST	DETAILS	TEMPERATURE	STANDARD	RESULTS
Ply Thickness				0.025 inch
 Tensile Strength Ultimate Tensile Strain Modulus 	• Ноор • Ноор • Ноор	73°F	ASTM D 3039	 48,070 psi 1.14% 4,110,000 psi
 Tensile Strength Ultimate Tensile Strain Modulus 	 Axial Axial Axial	73°F	ASTM D 3039	 55,390 psi 1.25% 4,140,000 psi
Lap Shear Adhesion	Adhesive Strength	73°F	ASTM D 3165	2,990 psi
Pipe Spool Survival	With Defect	Room Temperature	ASME PCC-2-2018	Survived

Tensile Strength vs. Test Temperature - P91 system



▶ The Standard J316 Kit is for services between -40°C/F to 135°C/275°F. ▶ The High Temperature P91 Kit is for services between 65°C/150°F and 301°C/575°F.

Test Temperatrue (°F)

Stronger than steel.

RESTORE MAXIMUM ALLOWABLE OPERATING PRESSURE WITHOUT SYSTEM SHUTDOWN.

Kits are engineered to provide strength that enables a pipe to be restored to maximum allowable operating pressure (MAOP) without system shutdown. The system is comprised of water curing urethane resin impregnated in a biaxial fiberglass, thoroughly and independently tested at both the university and international laboratory levels. The first component, and most exclusive feature of the system, is the selection of Biaxial Fiberglass material, which provides reinforcement in the hoop and axial directions and is among the strongest available non-metallic repair material on the market. The second component is the binding force in the system. This system is an impregnated urethane resin, which allows for uniform loading throughout the entire wrap. Our third component, for repairs that require surfaces to be modified (e.g. heavy pitting or irregular shapes); the high modulus filler can be applied. These components form a composite system that is stronger than steel. The structural system forms a pipe around a pipe, and each successive wrap increases the pressure rating. Minimal creep ensures a long service life.

Kits require an engineering assessment to compile service information such as substrate material, wall loss, operating temperature, pressure ranges and environment exposure. Our software analyzes this information to determine the number of wraps required for each pipe repair.



TEMPERATURE CURE TABLE				
TEST	DETAILS	TEMPERATURE		
95°F (35°C)	23 min.	3 min.		
70°F (21°C)	28 min.	8 min.		
60°F (16°C)	1 hr. 25 min.	10 min.		
50°F (10°C)	2 hrs. 42 min.	14 min.		
42°F (6°C)	3 hrs. 2 min.	17 min.		
35°F (2°C)	6 hrs. 21 min.	20 min.		

CHEMICAL COMPATIBILITY CHART				
CHEMICAL TESTED	RESULT			
Sulfuric Acid 50%	No Effect			
Hydrochloric Acid 50%	No Effect			
Hydroxide Solution	No Effect			
Gasoline	No Effect			
Toluene	No Effect			
Xylene	No Effect			
Mineral Spirits	No Effect			
Distilled Water	No Effect			
ASTM D 543, Test period 2 months at 73°F				





PERFORMANCE

This is the premier fiberglass wrap system used to rehabilitate and restore original operational strength to damaged, corroded and eroded piping systems.

PIPELINE PROTECTION

Our kits can be installed on tees, elbows, straight runs of pipe, confined spaces and irregular surfaces that require structural reinforcement or leak containment. The adhesive properties of the urethane allow it to be applied to most substrates.

COMPLIANT TECHNOLOGY

Our kits are compliant to DOT regulation, ASME PCC-2 Article 4.1, 4.2 ANSI ISO-24817.



t 73°F (23°C)