

PRESSURE PIPE REHABILITATION

Thermo-Wrap™ Heat Resistant Composites



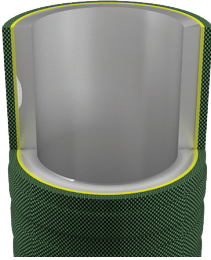

APPLICATIONS

- Process piping
- Transmission & distribution piping
- Chemicals, oil, gases, water & steam lines
- Flares & blowdowns
- Girth welds on vessels & pipelines, straights, elbows, tees, reducers



COMPOSITE REPAIR SYSTEMS

STRUCTURAL TECHNOLOGIES provides a robust line of piping repair composite systems which can be used for high temperature and chemical resistance. For these specialized applications, we combine our comprehensive design and analysis services with the industry-leading products of Neptune Research (NRI) to help select a solution that matches clients' performance criteria and installation windows.

PRODUCT:	Thermo-Wrap CF™	Thermo-Wrap™ 500
		
Description	Field-saturated, bi-axial hybrid carbon & glass fiber composite system used to repair & reinforce internal or external corrosion at elevated temps.	Factory-saturated composite system compatible w/ temps <500°F (260°C). By eliminating the need for field-saturation, this product can be applied faster
Application Temperature	50° to 280°F	100° to 350°F
Operating Temperature	-50° to 300°F	-50° to 500°F



Thermo-Wrap™ Composites Chemical Resistance Guide

NRI's pre-impregnated and field-saturated composites are manufactured to restore, protect and reinforce pipes, pipeline components, and civil structures. Proper glass and/or carbon fiber product and binding resin selection are critical to provide the longest life, lowest life cycle cost, best corrosion performance, and to minimize the risk failure in presence of chemical compounds in aggressive environments. This compatibility chart demonstrates that these systems are highly resistant to the most common aggressive corrosive chemicals.

Chemical	Thermo-Wrap™	Thermo-Wrap CF™	
Acetic Acid 20%	A	NE	E = Excellent G = Good A = Acceptable P = Poor NE = Not Evaluated
Acetone	G	E	
Ammonium Hydroxide 29%	E	E	
Copper Sulfate	E	E	
Diesel	E	E	
Diethanolamine	E	E	
Ethanol	E	G	
Ethylene Dichloride	G	A	
Gasoline	E	G	
Hydrochloric Acid, 40%	G	E	
Hydrofluoric Acid, 40%	P	NE	
Isohexane	E	E	
Isopropyl Alcohol	E	G	
Methanol	E	E	
Methyl Ethyl Ketone (2-butanone)	G	E	
NAPTHA	E	E	
Sodium Hydroxide (Caustic Soda)	G	E	
Sulfuric Acid, 40%	E	E	
Toluene	E	E	
Water	E	E	