

THERMO-WRAP™

COMPOSITE REPAIR SYSTEM FOR HIGH TEMPERATURE AND PROCESS PIPING



Description

Thermo-Wrap™ is a custom engineered composite system utilizing a high strength, bidirectional, woven fiberglass tape in combination with NRI's proprietary Thermo-Poxy™ epoxy system for the repair and restoration of pipe operating at elevated temperatures. This composite repair system was designed and tested to repair defects in accordance with the ASME PCC-2 and ISO TS-24817. Thermo-Wrap is specifically designed for repair applications which require the composite to maintain the high design strengths in high temperature environments, while still curing under room temperature conditions.

Mechanical Properties

Test	Temperature	Time	Value
Tensile Strength	Room Temp	24 Hours	85,800 psi (5915 bar)
	300°F (149°C)	30 Days	84,500 psi (5826 bar)
Tensile Modulus	Room Temp	24 Hours	4,385,300 psi (302,355 bar)
	300°F (149°C)	30 Days	4,609,600 psi (317,820 bar)
Lap Shear (to steel)	Room Temp	24 Hours	3,150 psi (217 bar)
	300°F (149°C)	7 Days	3,180 psi (219 bar)

Typical Applications

- Ideal for Flare Lines
- Steam Piping
- Girth welds, elbows, tees
- Anywhere elevated temperatures are of concern or expected

Benefits

- High temperature rating with an ambient cured epoxy
- No heating or post-curing required
- Full factory engineering calculations, consultation, and support

Physical Properties

VOCs: None

Shelf Life (epoxy): 12 Months

Cure Time:

Approx. 18 hrs @ 75°F (24°C)

Approx. 3 hrs @ 280°F (138°C)

Service Temperature:

MAX: Up to 300°F (149°C)

Application Temperature:

50 to 200°F (5 to 93°C)



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Innovative Composite Solutions