

PROPERTIES / FEATURES

PROPERTIES	DIAMOND WRAP [®]
Total layers	2 – 6
Cure Time (typical)(hr)	8
Maximum Operating Temperature (°F)	180° *
Chemical Resistance (pH range)	2 to 12
Nominal thickness (in)	.04 (2ply) – .135 (6ply)
Carbon fiber content by weight	35 – 50%
Glass fiber content by weight	0%
Lap Shear strength @ 140° F (Adhesive) (psi)	>1250
Compressive Strength of Putty @ 140° F (psi)	8805
Hardness Shore D	78 to 84
Linear elastic behavior	1.20% strain
Elastic Modulus Hoop direction (psi)	7.13 x 10 ⁶
Elastic Modulus Axial direction (psi)	3.46 x 10 ⁶
Tensile Strength (psi) Hoop	83,646
Tensile Strength (psi) Axial	35,930
Coefficient of Thermal Expansion Hoop direction (in/in/°F)	1.4 x 10 ⁻⁵
Coefficient of Thermal Expansion Axial direction (in/in/°F)	.71 x 10 ⁻⁵
Design Stress (psi) Hoop	64,407
Design Stress (psi) Axial	27,666
Fatigue (cycle without failure—defect dependent)	35,874 (65%) to 200,000 defect 50% @ 110% Change in pressure
Stiffness comparison to steel	1/3
Field testing 20 sites	8 years
Meets requirements of ASME B31G, PCC, API, AGA, and DOT	Yes

FEATURES	DIAMOND WRAP [®]
Install on reducers, elbows, tees	Yes
Installation near weld joint 50%	Yes
Repair of girth welds	Yes
Install on damp pipe	Yes
Salt water service	Yes
Maximum wet service temp	180° F *
Max operating temp/svc life (°C)	180°* – 100 yrs
Drill thru wrap to access pipe	Yes
MSDS hazardous shipping adhesive	No

* = Higher temperature systems available – 130C/266F – 177C/350F – 370C/698F