

VIPERSKIN

ViperSkin is the first bi-axial, hybrid carbon and glass fiber, pre-saturated system to blend the unsurpassed strength and stiffness of carbon with the ease and use of a moisture-cured, factory-saturated polyurethane. The pre-saturated system ensures appropriate fiber-to-resin content ratios to deliver reliable performance in restoring pipeline integrity on lines with complex geometry.

APPLICATIONS

- › Transmission and distribution pipelines
- › Oil and gas risers and subsea structures
- › Process piping: chemicals, oil, gases, water, and steam
- › Mechanical dents and defects
- › Girth welds on vessels and pipelines
- › Straight pipelines, elbows, tees, and flanges

COMPLIANT WITH:

(standards/certifications)

- › AB-539
- › ASME PCC-2
- › ASME B31
- › ISO 24817
- › US DOT



BENEFITS:

- › Factory saturation of moisture-cured polyurethane resin reduces composite field preparation time by more than 50%
- › Factory saturation ensures the right fiber-to-resin ratio with constant strength and mechanical properties
- › Easy application in any conditions, including damp or sweating pipes and in submerged environments
- › No heating or post-curing
- › Suitable for irregular shapes and geometries
- › Can be used on lines of any diameter

VIPERSKIN

QUALIFICATION DATA

| PROPERTY | CIRCUMFERENTIAL DIRECTION | AXIAL DIRECTION |
|---|--|---------------------|
| Tensile Strength | 101.6 ksi (700.6 MPa) | 24.9 ksi (172 MPa) |
| Tensile Modulus | 11.32 Msi (78.05 GPa) | 1.75 Msi (12.1 GPa) |
| Ply Thickness | 0.018" (0.46 mm) | |
| Hardness | 75 | |
| Max Recommended Application Temperature | 120°F (50°C) | |
| Shelf Life | 12 months | |
| Storage | Do not freeze. Shelf life is based on continuous storage between 50°F (10°C) and 72°F (22°C) . Long term exposure above 72°F (22°C), will reduce the shelf life of these materials. Prolonged exposure above 95°F (35°C) quickly diminishes the reactivity of the product and should be avoided. Keep container tightly closed (do not open until ready to use). For industrial use only. | |

CURING SCHEDULE

| TEMPERATURE | | SET TIME | CURE TIME |
|-------------|-----|----------|-----------|
| (C) | (F) | (HRS) | (HRS) |
| 10 | 50 | 5.20 | 24 |
| 16 | 60 | 3.45 | 15 |
| 24 | 75 | 2.30 | 5.5 |
| 32 | 90 | 2.00 | 4.25 |
| 49 | 120 | 1.00 | 3 |

REPAIR SYSTEM COMPONENTS:

- › Filler: EPN-101, EPN-242
- › Primer: PPR-220, PPR-290
- › Prepreg (optional isolation layer): XT-FP
- › Prepreg: VS

WARRANTY CSNRI routinely implements product improvements. Please contact your local distributor or office for the most current product specifications. CSNRI warrants the quality of this product when used according to directions.

PS_0425

ISO 9001 Certified