

VIPER-SKIN®

PIPELINE INTEGRITY KITS

8 LAYERS, < 80% WALL LOSS, < 800 PSI



Description

With 8 layers, the Viper-Skin® Pipeline Integrity Kits (PIK) enable one to repair non-leaking externally corroded pipes exhibiting wall loss up to 80% with pressures up to 800 psi (55 bar) without shutdown or replacement. This operator qualified engineered system was designed to conform to and is recognized by ASME PCC-2, ASME B31, ISO TS24817, DOT, API, and CSA Z662 standards for nonmetallic reinforcing solutions, thus ensuring product application integrity.

Design Specifications

Pre-engineered for non-leaking pipelines, Grade B thru X65 experiencing external corrosion with up to 80% wall loss over a 2" x 2" area resulting in a 12" repair length; multiple kits can be used to address longer repairs. To assure your repair meets these guidelines, or for a custom designed solution, please contact your NRI representative.

Mechanical Properties

Test	Method	Result
Tensile Strength	ASTM D3039	Hoop: 100,000 psi (6,894.7 bar)
Flexural Strength	ASTM D790	61,600 psi (4,247 bar)
In-Plane Shear Strength	ASTM D5379	6,145 psi (423 bar)
CTE	ASTM D648	3.218 µm/m°C
Lap Shear	ASTM D3163	1,782 psi (122.9 bar)

Kit #	Description
PIK-VS02	Viper-Skin Pipeline Integrity Kit 2" OD
PIK-VS03	Viper-Skin Pipeline Integrity Kit 3" OD
PIK-VS04	Viper-Skin Pipeline Integrity Kit 4" OD
PIK-VS06	Viper-Skin Pipeline Integrity Kit 6" OD
PIK-VS08	Viper-Skin Pipeline Integrity Kit 8" OD
PIK-VS10	Viper-Skin Pipeline Integrity Kit 10" OD
PIK-VS12	Viper-Skin Pipeline Integrity Kit 12" OD



Typical Applications

- Pipeline integrity
- Transmission and distribution pipelines
- Oil and gas risers
- Girth welds on vessels and pipelines
- Straights, elbows, tees, and flanges
- Process piping: chemicals, oil, gases, and water
- Atmospheric corrosion

Benefits

- Water-activated polyurethane resin reduces composite preparation time by over 50%
- Installation in wet, rainy, or submerged environments ensures ease of application in virtually any situation
- Simplicity and flexibility permit application to irregular shapes and geometries
- Full factory engineering consultation and support, ensuring safe and successful repairs

Kit Contents

- Syntho-Poxy™HC Filler
- Syntho-Subsea™LV Epoxy Primer
- Syntho-Glass®XT
- Viper-Skin
- Compression Film

Physical Properties

VOCs: None

Working Time: 30 Minutes @ 75°F (24°C)

Set Time: 2 Hours @ 75°F (24°C)

Service Temperature:

-50° to 194°F (-46° to 90°C)

Application Temperature:

32° to 150°F (-18° to 65°C)

Shelf Life: 12 Months with recommended storage conditions

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