

Milliken Infrastructure

# FormaShield®

Chemically Resistant Composite Repair System



**FormaShield®** is a high strength Tri-Directional Fiber Glass solution for on-site repair of corroded piping structures. Provided as a Two Part Epoxy, FormaShield is a great general purpose solution with a high TG.

MECHANICAL PROPERTIES	UNITS	ASTM TEST METHOD	FORMASHIELD CR
Tensile Strength	PSI, MPA	D3039-00, A370, E8	74,00 Hoop (510) 17,900 Axial (123)
Tensile Modulus	PSI, MPa	D3039-00	3.1x10 <sup>6</sup> (21,500)
Flexural Strength	PSI, MPa	D790-00	84,200 (580)
Flexural Modulus	PSI, MPa	D790-00	3.0x10 <sup>6</sup> (20,700)
Shear Modulus	PSI, MPa	D5279-01	1.3x10 <sup>6</sup> (9,100)
Interlaminar Shear Strength	PSI, MPa	D3165-07	19,300 (133)
Hardness, Shore D		D-2240	85
Glass Transition		E1356	220°F (104.5°C)
Thermal Expansion		E831-6	8.7x10 <sup>-6</sup> (in/in/°F) 15.6(in/in/°C)
Poisson's Ratio		D3039-00	0.37

## PHYSICAL PROPERTIES

Stocked Width	4", 6" & 12" (10cm, 15cm, 30.5cm)
Fabric Orientation	Tri-Axial
Nominal Ply Thickness	0.030 Inches (30 mils)(0.76 mm)

## GENERAL PROPERTIES

Maximum Operating Temperature	185°F (84.5°C)
Working Time (Dependent on Temperature)	40 Minutes @ Ambient
Set Time	1 Hour
Chemical Resistance	Gasoline, Mek, Acetone, Toluene, Ethyl Alcohol and other hydrocarbons
Shelf Life	One year from ship date
Application Conditions	Above 55°F(13°C) up to 120°F (49°C)
Cure Time	24-72 Hours

Before using any Milliken Infrastructure Solutions, LLC product, the user must review the most recent version of the product's technical data sheet, material safety data sheet and other applicable documents, available at [infrastructure.milliken.com](http://infrastructure.milliken.com) or by calling 1-855-655-6750. Milliken Infrastructure Solutions, LLC is a subsidiary of Milliken & Company. The Milliken logo is registered by Milliken & Company and used under license by Milliken Infrastructure Solutions, LLC, all rights reserved. Technology

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## Typical Uses

The FormaShield® system is generally used on piping systems suffering from corrosion or mechanical damage. The system is suitable to repair the following:

- External corrosion and pitting
- Dents, gouges and scratches
- Welds and other manufacturing flaws

## Benefits

- Site impregnated
- Resin Part A and Part B come to the field pre-measured
- Structural fabric is impregnated in the field with conventional equipment
- Ideal application temperature up to 185°F (84.5°C)

## Complete Kit Includes

- Fiberglass Fabric
- Resin- Parts A & B
- Primer Kit
- Constrictor Wrap
- Mixing Tools, Gloves



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