

# GF-130 MCU

## Industrial- Strength Pipe Repair System

### Description

Advanced FRP Systems' **GF-130 MCU** is a pre-impregnated, bi-directional fiberglass composite system designed to quickly repair, rebuild and reinforce pipe and other structures. This innovative moisture cured polymer reacts with water to form a high strength, moisture tolerant composite system in 60 minutes or less. **GF-130 MCU**, when used in conjunction with our fast-set epoxy stick, can stop active leaks in water pipes of all sizes. This product is intended for repairs of small leaks from cracks, corrosion and joint failures and will not work for large diameter or high pressure leaks.

### Product Advantages

- Bi-directional weave provides outstanding strength in all directions
- Zero VOC polymeric systems
- Lightweight, pliable fabric easily conforms to any shape
- Pre-impregnated with resin to ensure optimal resin to fiber ratio
- Moisture cured resin can be used in the presence of water or underwater
- Can be applied in multiple layers

### Suggested Application

Designed for use on circulating water lines, process piping, oil and gas piping and risers, transmission pipe line repairs, as well as tank and vessel repairs. Designed to be applied with our **Steel-Stik** fast set epoxy putty. Can be used in conjunction with carbon fiber or fiberglass pipe repair products for a permanent repair solution.

### Performance Data

	Test Method	Results
Coefficient of Linear Thermal Exp.	ASTM E831	5.10 x 10 <sup>-6</sup> in/in °F
Tensile Strength	ASTM D3039	Actual Value: 43,500 psi Design Value: 32,625 psi
Young's Modulus	ASTM D3039	Actual Value: 4,711 ksi Design Value: 3,533 ksi
Poisson's Ratio	ASTM D3039	0.131
Lap Shear	ASTM D3165	2,050 psi
Hardness – Shore D		82
Flexural Strength	ASTM D790	Actual Value: 45,200 psi Design Value: 33,950 psi
Max Service Temperature		195 °F (90.6 °C)
Elongation at Break	ASTM D 3039	3.7%
Effective Fabric Thickness		0.013 in

## Product Characteristics

**Finish:** Semi-gloss

**Color:** Off-White

**Density:** 2.20 g/mL

**GF-130 MCU** is sold in pre-packaged kits and includes a corresponding **Steel-Stik Epoxy**.

**Sold FOB Weymouth, MA**

Available in 4", 6", and 8" widths and lengths from 15 - 60 ft. widths.

***GF-130 MCU is designed to be used in conjunction with our Steel-Stik fast cure epoxy putty. This product is designed to stop active leaks in water pipes but is only suitable for small leaks without a lot of pressure. Once cured, it will contain leaks up to 60 psi. For higher pressure lines or long-term leak repair use in conjunction with Glass or Carbon fiber repair kits.***

## Application Information

***All Advanced FRP Systems products should be installed by a certified applicator or with direct oversight by Advanced FRP Systems, Inc. This data sheet provides general application guidelines for GF-130 MCU.***

***Contact Advanced FRP Systems for more information if your project has detailed coating specifications.***

Prior to application of **GF-130 MCU** loose coating, dirt and debris must be removed from the section to be repaired. Follow surface preparation guidelines below depending on the substrate to be repaired. Identify the exact spot on the pipe that is leaking.

If the leak is part of a crack, seal off as much of the crack as possible with a **Steel-Stik** epoxy putty prior to application of **GF-130 MCU**. It may be necessary to grind out a small V shaped groove at the point of the leak to aid in sealing. Once the exact spot of the leak is identified, open the vacuum sealed package of the **GF-130 MCU** and submerge in a bucket of ambient temperature water. With gloves, massage the **GF-130 MCU** for 3 – 5 minutes while underwater to ensure complete saturation with water. Simultaneously, begin mixing the **Steel-Stik**, 5 minute cure epoxy putty. Mix by kneading with gloved hand until the color is uniform.

Place a ball of the **Steel-Stik** putty just above the leak. Ensure you have sufficient volume of epoxy to fill in any voids present. Multiple **Steel-Stiks** may be necessary. Begin wrapping the **GF-130 MCU** starting just below the leak and working all the way around the pipe before you get to the leaking area. As you wrap over the **Steel-Stik** ball, press it down over the leak tightly with the fiberglass wrap. Continue wrapping around the pipe, pulling the Fiberglass wrap as tight as possible. Massage the **Steel-Stik** putty into the leak as you continue to wrap with the fiberglass.

A minimum of 6 layers is recommended for water-fastness. For larger pipes, multiple kits may be required. Once the wrap is complete, pour water over the wrap and continue to massage it in the direction of the wrap to keep it tightly wrapped around the pipe for 10 minutes or until the wrap becomes very sticky.

Once the wrap becomes very sticky, apply a plastic constriction sheet to tightly wrap the repair and ensure a water tight finish. Break air holes in the plastic wrap by hitting with a wire brush or using a spiked roller to allow CO2 to escape. Allow the wrap to cure and become hard for at least 45 minutes and remove plastic before removing and returning to service.

## Surface Preparation

***Metallic Pipes:*** Remove all oil, grease, loose coatings and other debris with hand tools. Grinders may be used if the pipe has significant corrosion on the exterior.

***Fiberglass Pipes:*** Remove all oil, grease, loose coatings and other debris with hand tools. Sand the surface of the fiberglass to roughen the profile and remove the shine.

***Concrete (Immersion/Secondary Containment):*** Refer to SSPC-SP 13/ NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. Surface should be thoroughly cleaned but may be visibly damp. Standing water should be removed if possible. Concrete and mortar must be cured at least 28 days @ 75 °F. Surface must be free of laitance, concrete dust, dirt, form release, curing aids and other foreign material.

## Storage and Shelf Life

**GF-130 MCU** must be stored between 50 – 90 °F, out of direct sunlight. If stored in these conditions, the product will have a 2-year shelf life.

## Safety Precautions

Please consult up-to-date Safety Data Sheets (SDS's) prior to use. An SDS should be available on site whenever Advanced FRP products are being used.

## Warranty Information

Advanced FRP Systems, Inc. warrants that our products are free of manufacturing defects in accordance with applicable Advanced FRP quality control parameters. Liability for products proven defective, if any, is limited to replacement of defective product or refund of purchase price as determined by Advanced FRP Systems. Additional warranties and protection are available. Contact Advanced FRP for more information.

## Disclaimer

The information and recommendations set forth upon this data sheet are based on years of laboratory and field analysis. This information is intended to be used as guidance only as many factors affect the performance of polymeric systems. Actual exposure conditions are the best test of suitability and Advanced FRP Systems will generally provide complimentary samples for field testing.

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