



# An "Aerospace" Composite System for Pipeline Repair & Rehabilitation

Various agencies are becoming increasingly aware of the crumbling infrastructure in the world. Public safety, threats to the environment and monetary loss are concerning private industry and governments alike. What's the solution?

Composites. Materials that combine two or more components to yield characteristics superior to any one of the individual components. Strong and lightweight, composites offer resistance to corrosion and chemical attack. They can be customized to deal with a wide array of environmental and industrial conditions. All of these characteristics make composites useful to engineers for pipeline repair and rehabilitation.



*The quantity of materials provided with each kit is engineered to provide you with plenty of reinforcing and pressure containing power - but not a pile of waste!*

PowerSleeve<sup>®</sup>, our engineered composite kit, consists of a fabric that is a hybrid alloy, non-crimped system, employing aerospace grade E-glass and DuPont's Kevlar<sup>®</sup> yarns, arranged in a multi-axis layout that maximizes the ultimate composite strengths. This fabric is factory pre-treated using a state-of-the-art process which assures that all micro-fibers in the wall will be matrix-wetted. Tests of these pre-treatments show a finished PowerSleeve<sup>®</sup> installation is much stronger than an untreated lay-up. We also provide specialized fiber alloys and fiber types for your special applications.

The PowerResin<sup>™</sup> grade is selected for your application type - not some generic, brittle epoxy. Air Logistics' matrix is a custom blended resin & hardener system, developed to give our finished product exceptional properties of flexibility, adhesion, toughness, chemical & thermal resistance, vibration, expansion/contraction, etc. Special grades of PowerResin<sup>™</sup> can handle special needs.

## General Characteristics for Standard System

- Tg. - 185 F.
- Working Time - 30 minute pot life, 2 hour layup "set" time @77° F
- Cure Time - 8 hours @ 77° F to full cure
- Chemical Resistance - Resistant to acetone, mek, toluene, gasoline, ethyl alcohol and many others
- Tensile Strength - 75,400 psi
- Tensile Modulus (e-6psi) - 3.9
- Compressive Strength - 29,400 psi
- Interlaminar Shear - 4,580 psi



## Features

- Complete Installation Kits
- High Strength (Carbon Fiber available)
- Very Versatile
- Very Low Training Time
- Many Different Widths and Lengths
- Excellent Toughness – Resists Cracking
- Alternate Systems for High Temperature Applications
- Ships Non-Hazardous
- Works Over Obstructions
- Factory Pre-Measured and Sealed Components
- No VOC's
- Manufactured in the USA

## Sizes

Sizes available for any diameter • Widths available to 24" • Engineered, custom kits are available for special projects

**Adapted from the aerospace industry**, our field-applied systems incorporate advanced substrates and resins to field-build reliable, high strength, composite repairs for damaged or weakened pipe, tanks, and vessels. Technical support is available to assist you with standard and custom applications. Air Logistics is your source for professional quality composite products for pipeline repair and rehabilitation.



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