

The Future of CIPP

The Blue-Tek liner is a high quality pipe renewal technology developed by Brandenburger Companies in Germany and manufactured in the U.S. by Reline America, Incorporated. The Blue-Tek liner is both Ultraviolet (UV) Cured-In-Place-Pipe (CIPP) and a Glass-Fiber-Reinforced (GRP) pipe with a product life cycle of 50+ years. Over 10,000,000 LF have been installed in 25 countries around the world. The Blue-Tek liner system has led the GRP-CIPP revolution throughout the world, where older felt based technologies are rapidly being displaced by Glass-Fiber-Reinforced (GRP) Technologies.

BLUE-TEK™ GRP-CIPP is the Next Generation of CIPP.

It is easy to see why Blue-Tek and GRP-CIPP are the future of CIPP. Blue-Tek GRP-CIPP has all the positive aspects and qualities we have known and appreciated from the older felt based liner technology that has been the cornerstone of the trench-less pipe renewal industry for years.

Blue-Tek combines the tried and true technology of traditional felt based CIPP with some added technologies that solve many of the challenges faced by felt based liners. These added features are what separate the old from the new.

When compared to felt based liners, Blue-Tek liners are stronger, more environmentally friendly, and have better quality controls before and during installation. Also, Blue-Tek liners are not sensitive to cool spots caused by active infiltration during installation which may cause resin migration in traditional thermal cured felt liners.

BLUE-TEK™ Liners are Stronger

Because Blue-Tek Liners are fiberglass reinforced, they have 4-6 times more Flexural Strength (26,000 PSI vs. 5,000 PSI) and 4-6 times more Flexural Modulus (1,000,000 PSI vs. 250,000 PSI) than felt based liners. Blue-Tek Liners can be designed with a fully deteriorated criteria and thinner wall thicknesses and still achieve more strength than ever possible with traditional felt based liners. Furthermore, Blue-Tek Liners can be designed and considered a stand alone pipe. This provides the owner, engineer, and contractor with a much better long term solution for aging infrastructure.



Physical Properties

- Short Term Flexural E-Modulus

Blue-Tek - 1,000,000 PSI to 1,500,000 PSI
(Felt Liner - 250,000 PSI)

- Long Term Flexural E-Modulus

Blue-Tek - 600,000 PSI to 1,100,000 PSI
(Felt Liner - 150,000 PSI)

- Flexural Strength

Blue-Tek - 26,000 PSI to 33,000 PSI
(Felt Liner - 4,500 PSI)

- Chemical Resistance of Blue-Tek

Excellent

- Abrasive Resistance of Blue-Tek

Excellent

- Water Tightness of Blue-Tek

100%

- Porosity of Blue-Tek

None (0%)

BLUE-TEK™ GRP-CIPP is the Next Generation

BLUE-TEK™ Liners are More Environmentally Friendly

Because Blue-Tek Liners are cured by Ultraviolet light, they require no water for the cure process, as is the case with felt based liners. Additionally, since no water is used in the curing process, no styrene laced water is released into the sewer or storm systems, as is the case with felt based liners.

The release of styrene into treatment plants and waterways has been a hot button issue in recent years and very well may become a driving force in the CIPP industry. Blue-Tek is way ahead of the curve on this issue.

Thankfully, the annoying smell of styrene is also avoided with Blue-Tek Liners.

BLUE-TEK™ Liners are Not Sensitive to Cool Spots Caused by Active Infiltration During Installation

Traditional thermal cured felt based liners (as they are currently being installed) are compromised when cool spots are encountered during the cure process. These cool spots, often caused by active infiltration, cause the resin in the liner to pull back from the cool spot leaving a potential weak spot in the liner. Blue-Tek Liners are not compromised by cool spots, because they are not cured by heat and have an outer and inner film to encapsulate the resin and fiberglass. This is a distinct advantage to the owner, engineer, and contractor when integrity and quality are the priority.

BLUE-TEK™ Liners Offer Superior Quality Controls

Blue-Tek Liners are completely manufactured by Reline America, Inc. at their ISO 9001:2008 Certified facility in Saltville, Virginia. Consequently, the imperfections of contractor wet-out are completely avoided. Also, because Blue-Tek Liners are not thermally activated, refrigeration and the race against time for installation are avoided. Blue-Tek Liners can be stored in crates for up to 6 months before installation.

Furthermore, the entire curing process is controlled electronically and optically using CCTV and infrared sensors. During the installation process, the light train with live video (Pictured Above) is pulled through the inflated liner prior to cure. This allows for the final inspection of the liner moments before the UV light is turned on to begin the cure process. With this advantage, any abnormalities or unacceptable problems can be discovered and corrected prior to curing out the liner.

The cure process begins only after the UV lights are turned on and is controlled and monitored by a tamper proof computerized system specifically designed by Blue-Tek. The system controls & monitors speed and light source wattage to ensure that a uniform cure is reached throughout the liner. The system will provide quality control reports that document the curing process was adhered to for the owner, engineer, and contractor.

These quality controls are simply unavailable to traditional thermal cured felt liners, many times leaving owners, engineers, and contractors with a less than perfect line.

Michael E. Woodcock
Member

P.O. Box 510
117 Demase Street
Portland, TN 37148
P: 615-325-3374
E: michaelwoodcock@pucc.org

