

TL-420 Glass Mat Reinforced Furan Lining System

PRODUCT DESCRIPTION

TL-420 Series tank lining system is a high-performance Furan lining system. TL-420 consists of an optional primer, a trowel applied elastomeric adhesive basecoat, two layers of chopped strand fiberglass mat, saturated with furan resin, and a saturated surface veil.

TYPICAL USES

TL-420 is a heavy duty, reinforced lining system that is crack and impact resistant. TL-420 is typically used to line steel and concrete tanks holding or processing various chemicals. Because of the systems wear resistance, impact resistance and crack bridging qualities it is also ideally suited for protecting concrete structures, such as trenches and sumps exposed to aggressive chemicals.

HANDLING CHARACTERISTICS

The basecoat of TL-420 is applied by trowel. The saturant resin for the glass reinforcement and surface veil is typically applied by roller.

TYPICAL PROPERTIES

PROPERTY	TL-420
Barcol Hardness	40
Tensile strength ASTM C-307-83	11,600 psi
Flexural strength	21,450 psi
Coefficient of thermal expansion	1.2 x 10 ⁻⁵ in/in/°F
Temperature Resistance	160°F on concrete 200°F on steel 265°F on FRP
Color	Black

PACKAGING & COVERAGE

TL-420 is a multi component system consisting of TL-420 Adhesive Basecoat Parts A (resin) and B (hardener), 1½ oz. chopped strand mat and TL-420 Saturant Resin, Parts A (Resin) and B (Catalyst). TL-420 components are packaged as follows:

Component	Packaging Size	Coverage
TL-420 Adhesive Basecoat	4 gallon unit	100 sq. ft./unit
TL-420 Saturant Resin	1 gallon unit 5 gallon unit	11 sq. ft./gallon 11 sq. ft./gallon
440 Glass Mat Reinforcement	Rolls	Area x 2 + 10%
442 Surface Veil	Rolls	Area + 10%

**POT LIFE AND CURE
SCHEDULE @ 75°F***

Product	Pot life	Recoat	Chemical Service
Primer 75 (optional)	15-20 minutes	Min. 4 hrs, max. 48 hrs	N/A
TL-420* Adhesive Basecoat	40-60 Minutes	Basecoat: min. 10-12 hours** max. 48 hours	FINISHED SYSTEM: 48 HOURS
TL-420* Saturant Resin	10 Minutes	Saturant: min. 30 minutes max. 4 hours	

*These materials may be applied between 60 – 80°F. The pot life will be longer at the lower temperature range and much shorter at the higher temperature range. Use caution when using Saturant resin, POT LIFE IS SHORT. Mix only small batches and pour catalyzed resin out of can immediately when mixed. Do not leave catalyzed resin in cans, as violent exothermic reaction will occur, potentially causing serious burns.

** Adhesive Basecoat must be cured sufficiently to secure glass mat in place. Once Adhesive Basecoat is cured, begin saturant application over exposed fiberglass.

BID SPECIFICATION GUIDE

Use Blome TL-420 Glass Mat Reinforced Furan Lining System consisting of a 60 mil Adhesive Basecoat applied by trowel, two layers of 1½ ounce chopped strand mat saturated with TL-420 Saturant Resin, a Surface Veil and a 10-15 mil gel coat, as manufactured by Blome International O’Fallon, MO.

**APPLICATION GUIDELINES
STORAGE OF MATERIALS**

Proper storage of these materials is critical to handling characteristics and performance. Store all components in unopened containers in a dry place, at 50-75°F, out of direct sunlight, and protect from the elements. Keep away from heat and flame. 24 hours before use, narrow the storage temperature to 70-80°F to facilitate handling of the product. This product has a shelf life of 12 months when properly stored.

JOB SITE ENVIRONMENTAL CONDITIONS

The temperature of the surface to be lined and the ambient air temperature must be at least 50°F while applying this product and as it cures. Monitor weather conditions and dew point. Stop the application if the temperature falls within 5°F of the dew point. Use dehumidification and/or temperature control if necessary to meet this requirement.

SURFACE PREPARATION

STEEL: Steel surfaces intended for lining application must be clean and free of oil, grease, dirt, rust, mill scale, salts, other coatings, corrosion products and other deleterious substances. Welds and weld splatter must be ground smooth. Avoid skip welds. Grind all sharp projections and round all corners to a 1/8” radius. All steel to be lined must be abrasive blasted to white metal finish (NACE no. 1, SSPC SP5) with a 2-4-mil sharp anchor profile. Mask all areas that are not to be lined.

CONCRETE: New concrete must cure a minimum of 28 days. Concrete surfaces should be abrasive blasted to provide a sound surface with a texture similar to medium grit sandpaper. Surfaces must be dry.

PRIMING/SURFACE REPAIR

Mix and apply Primer 75 to concrete substrates by brush, roller or spray. Apply at 6-8 mils. Do not allow primer to puddle. Coverage rate should be 150-175 square feet per gallon. Allow primer to cure tack free before proceeding with application of TL-420 Adhesive Basecoat.

When priming concrete, it is important to apply the primer when ambient and substrate temperatures are declining. Apply sufficient amount of primer to seal the surface of the concrete without creating puddles. This may require more than one coat of primer depending on the porosity of the concrete. If more than one coat is necessary, allow each coat to cure tack free before applying the next coat.

MIXING AND APPLICATION

Important note: Plan your work carefully. Pre-cut reinforcing mat into easy to handle pieces. It's a good idea to have at least a couple of pair of metal spiked shoes such as golf shoes on hand so that the crew members can walk onto the wet basecoat without disturbing it and address minor problems that cannot otherwise be reached. Cover just enough area with basecoat that can be finished with glass and saturant before the basecoat begins to set. Avoid installing this product in direct sunlight. Installations in warm environments will set much faster than shaded, cool areas. Also, working in direct sunlight may cause pinholes and bubbles to form in the basecoat or saturant resin layers.

TL-420 Adhesive Basecoat is a mastic material. To mix it you will need a mixing drill with a mixing paddle attached. Mix TL-420 Adhesive Basecoat Resin and Hardener together for 1-2 minutes. Immediately apply to prepared and primed surface using a trowel, dry wall blade, plaster trowel or roller. Apply at an even thickness of 60 mils. As soon as an area is covered with the basecoat and before it begins to set up or gel, imbed a layer of **#440 Chopped Strand Mat** using a dry short nap or a ribbed roller to lightly press the glass into the wet Adhesive Basecoat. Do not fully saturate glass mat into basecoat, but be certain to wet the entire back side of glass mat with the Adhesive Basecoat. Be certain to leave exposed glass that is white in color, which will later receive Saturant Resin. Overlap seams of glass a minimum of two inches (2"). Allow Adhesive Basecoat to cure firm before beginning the first application of TL-420 Saturant Resin.

TL-420 Saturant: Mix the Part A resin and Part B Catalyst in small batches, with a maximum size of a one gallon pail. Immediately apply mixed Saturant to the glass reinforcement using a medium nap roller. Apply first Saturant coat at an approximate rate of 0.3 lbs per square foot. Work from the pail dipping the roller into the resin and applying in even coats to saturate the glass. Apply liberal coat between overlapped glass. Pouring the resin directly onto the glass mat surface will greatly reduce coverage rates. Glass reinforcement is saturated when the silver color of the glass disappears and the saturated glass is dark brown or black in color.

Immediately imbed a second layer of **#440 Chopped Strand Mat** into fully saturated first layer of glass mat, using a ribbed roller. At this time, immediately apply another coating of mixed saturant to this second layer of glass mat using a medium nap roller. Liberally apply Saturant resin over this layer to assure complete saturation of both glass layers. Stagger seams in glass mat opposite seams in first layer of glass mat. While first two layers of saturated glass mat are still wet, immediately imbed Surface Veil into wet resin and apply final gel coat of Saturant

over Surface Veil using a medium nap roller. All of the steps using saturant resin must be made in immediate succession, making certain not to allow individual layers to cure until complete system is installed from first saturant application, through to the gel coat over Surface Veil. Plan work around small areas, or panels, that will allow all saturant steps to be completed in succession before moving onto adjacent areas.

Allow to cure for 48 hours at 75°F or above.

TOUCH UP OR RE-COATING

Inter-coat prep for touch up or re-coating requires that the surface be clean, dry and roughened by sanding, grinding or abrasive blasting. Touch up or recoat as needed using TL-420 materials.

CLEANUP

Clean tools and equipment with nonflammable chlorinated solvents before material begins to set.

SAFETY PRECAUTIONS

The various components of TL-420 products present health and safety hazards if they are handled improperly. Do not store, mix or use near open flame, sparks or heat source. Keep all containers closed when not in use. Always wear safety glasses, proper respirator, protective clothing and rubber gloves while mixing or applying these products. Refer to Safety Data Sheet prior to using these products.

CAUTION

TL-420 may cause skin irritation with prolonged or repeated contact. Handle with care and read the material safety data sheet, which is available for each product.

WARRANTY

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. Our material data sheets and other literature are to be considered accurate and reliable, but are used as guides only. WE GIVE NO WARRANTY OR GUARANTEE, WHETHER OF MERCHANTABILITY OR FITNESS OF PURPOSE OR OTHERWISE, AND WE ASSUME NO LIABILITY IN CONNECTION THEREWITH. We are happy to give suggestions for applications; however, the user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for consequential or incidental damages. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole option, to repayment of the purchase price of the non-conforming goods.

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