BLOME INTERNATIONAL

*Surrounding You with Exceptional Protection*

TANK LINING SYSTEMS

# TL-920

## Trowelable Flake Glass Epoxy Novolac Lining System

### PRODUCT DESCRIPTION

Blome TL-920 is a 100% solids, trowelable, high performance, flake glass, epoxy novolac tank lining system. TL-920 is highly filled with carefully selected large diameter glass flakes. Our flake glass is chemically treated for maximum integration into the resin matrix, which maximizes permeation resistance and physical properties. TL-920 is specially formulated to resist up to 98% sulfuric acid exposure and many other harsh chemical environments. TL-920 will discolor when exposed to concentrated sulfuric acid. This is normal and will not affect its performance. This unique formulation is suitable for service up to 180 °F wet splash and spill environments and up to 270 °F in dry gas environments.

### TYPICAL USES

Blome TL-920 provides a tough, durable lining system that protects properly prepared and primed substrates from chemical attack. Typical applications include tank linings, secondary containment areas, FGD tank and ductwork linings, and structural steel protection. TL-920 can also be used as a membrane in chemical-resistant masonry systems.

### HANDLING CHARACTERISTICS

TL-920 is applied by trowel method in two x 40-50 mils coats for a total thickness of 80-100 mils.

### TYPICAL PROPERTIES

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|---|---|
| Solids by Volume | 100% |
| Tensile strength | 3,300 – 3,500 PSI |
| Tensile elongation | 1-2% |
| Bond strength to steel | 3,300 – 3,500 PSI |
| Bond strength to concrete | Concrete cohesive Failure |
| Flexural strength | 7,250 PSI |
| Permeability ( perm-inch) ASTM E-96 | 0.0002 |
| Coefficient of Thermal Expansion | 14-16 X $10^{-6}$ IN/IN/F |
| Taber Abrasion (CS-17, 1000g) | 50 (1000 CYCLES) |
| Hardness (Shore D) | 85-90 |
| Shelf life @ 70°F | 12 months |
| Colors | White, med. gray |
| Mix Ratio (Resin:Hardener) by wt. | 3.7:1 |
| Mix Ratio (Resin:Hardener) by vol. | 3.0:1 |
| Coverage (@ 40 mils WFT/DFT) | 40 sq. ft./gallon |
| Pot life @ 70°F | 25-30 minutes |
| Tack free @ 70°F | 5 – 7 HOURS |
| Final Cure@ 70°F | 48 HOURS |
| Primer | Primer 75 |

## PACKAGING & STORAGE

TL-920 is a two component material consisting of Part A (resin) and Part B (hardener). TL-920 is packaged in 3 gallon units, consisting of a short-filled gallon can of Hardener (Part B) and a short-filled pail of Resin (Part A) for easy mixing.

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.

## BID SPECIFICATION GUIDE

Use TL-920 filled with large diameter glass flakes and having permeability of .0002 perm-inch as manufactured by Blome International O'Fallon Mo. Use in accordance with manufactures most currently published technical product information.

## APPLICATION GUIDELINES

### 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 controls if necessary to meet this requirement. Always use forced ventilation while applying this material and for its entire cure cycle.

### JOB SITE STORAGE OF MATERIALS

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### 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. All pitting, scratches, gouges, and other defects must be repaired either by welding or by filling with Blome CP-83MP. Mask all areas that are not to be lined.

Concrete: Ideally, new concrete must cure a minimum of 28 days. Concrete that has cured less than this may be primed with Primer 75 before proceeding with TL-920. Contact Blome International for additional details. Concrete surfaces should be abrasive blasted to provide a sound surface with a texture similar to medium grit sandpaper. Surfaces must be dry. All voids, pits, rock pockets and honeycombed surfaces should be filled with Blome CP-83MP epoxy repair material prior to application of TL-920.

**PRIMING/SURFACE REPAIR**

- Mix and apply Primer 75 by brush, roller or spray. Apply at 6-8 mils. Do not allow primer to puddle. Coverage rate should be 200 – 250 square feet per gallon. Allow primer to cure tack free before proceeding with application of TL-920.

- Properly prepared steel need not be primed if TL-920 is applied before flash rusting or surface contamination occurs.

- 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.

- After the last coat of primer has cured tack free, fill any voids in the concrete surface using Blome CP-83MP and allow to cure tack free before application of TL-920.

**MIXING AND APPLICATION**

- Stir Part A to a smooth, uniform consistency and color using a Jiffy type mixer.

- For mix an entire unit of TL-920. Pour Hardener (Part B) into pail of Resin (Part A) and mix thoroughly for 2-3 minutes.

- Be sure to scrape the sides and bottom of the mixing pail to ensure thorough mixing.

- Pot life of the mixture will be approximately 25-30 minutes at 70 °F (significantly less at elevated temperatures). Plan work accordingly

- The longer the material is in the pail after mixing, the shorter the pot-life will be. USE IMMEDIATELY.

- Apply a 40-50 mil base coat using a trowel. Before the basecoat cures, slightly dampen a short nap roller with toluene or xylene and back roll the surface of the fresh coating (one or two passes) to orient the glass flakes parallel to the substrate. Allow to cure tack free before applying the topcoat.

- Before applying the topcoat, closely inspect the basecoat to ensure that there are no soft, uncured spots. If there are uncured spots, remove by scrapping and solvent wiping and reapply the TL-920 to the area to be repaired. Sand or grind down any sharp protrusions.

- Mix topcoat material just as the basecoat. Apply 40-50 mils by trowel. A contrasting color of basecoat and topcoat can be used to visually assist in application (i.e. – one coat white, one coat gray). Application of the basecoat and topcoat in the same color is also acceptable. Spread to an even, uniform finish. Before the topcoat cures, slightly dampen a short nap roller with toluene or xylene and back roll the surface of the fresh coating (one or two passes) to orient the glass flakes parallel to the substrate.

**INTER-COAT PREP**

- When applying subsequent coats, allow previous coat to cure firm to the touch. If surface is not contaminated and has not cured beyond 5 days at an average temperature of 75°F, no inter-coat prep is required.

If surface has been exposed to contamination or has cured beyond 5 days or has been exposed to direct sunlight for over 12 hours do the following: Remove any contamination and mechanically abrade by sanding before proceeding to the next coat.

**INSPECTING FOR PINHOLES**

- Spark test cured lining at 100 volts per mil. Mark all pinholes and repair using the following touch-up procedure. Retest only the areas that have been repaired.

**TOUCH-UP OR RECOATING**

- Sand away/remove defective area down to the substrate. Mix, apply and cure material as described in sections above.

**CURE TIME**

| | |
|---|---|
| Pot life @ 70°F | 25-30 minutes |
| Tack free @ 70°F | 5-7 hours |
| Final cure | 48 hours |

**CLEANUP**

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

**SAFETY PRECAUTIONS**

The various components of TL-920 products present health and safety hazards if they are handled improperly. Keep all containers closed when not in use. Always wear safety glasses, proper respirator, and protective clothing and rubber gloves while mixing or applying these products. Refer to Safety Data Sheet prior to using these products.

**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 MERCHANT ABILITY 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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