BLOME INTERNATIONAL

Surrounding You with Exceptional Protection

TANK LINING SYSTEMS

TL-81 AR
Ceramic Filled Epoxy Coating

DESCRIPTIONS AND USES

Blome International's epoxy tank lining systems are formulated to provide excellent performance in some of the most aggressive applications found in the process industries. Blome TL-81 AR exhibits outstanding resistance to abrasion and erosion due to its ceramic, aluminum oxide filled formulation. In addition, TL-81 AR is well suited for coating structural steel in aggressive fume or vapor service. Blome TL-81 AR offers excellent resistance to splash and spills of highly corrosive chemicals.

TL-81 AR is a two component product with a 4:1 volumetric mix ratio. It is typically applied by plural component spray equipment, brush, or roller, at thicknesses of 15-to-50 mils in one or two coats. TL-81 AR exhibits several unique properties, including resistance to various chemicals, including many acids, concentrated caustics, fuels, salts and many solvents. TL-81 AR also offers impact resistance, resistance to cracking when exposed to torsional twisting, excellent edge coat properties, superior bond strength to steel and concrete, and good surface tolerance.

GENERAL USES

TL-81 AR is suited for a variety of lining and coating applications including:
Slurry Tank Linings, chutes, hoppers, mixer blades.
Chemical Storage Tanks
Caustic Storage Tanks
Oil Storage Tanks
Rail Car "center bands"
Structural Steel in aggressive fumes and vapors
Waste Water Tanks

PACKAGING/COVERAGE

TL-81 AR is available in 1-gallon, 5-gallon, and 25-gallon units. Each unit consists of pre-measured Part A and Part B components.

Application thickness will vary depending on expected service conditions. Consult Blome International's Tank Lining Systems Guide or contact our technical service group for specific lining recommendations.

Coverage rates will be affected by the condition of surface being coated (degraded vs. smooth, steel vs. concrete, etc.). To calculate theoretical coverage per gallon, divide desired mil thickness into 1,604. (For example, theoretical coverage for a 30 mil thickness is: 1,604 divided by 30 = 53.46 square feet per gallon.) For practical coverage, make necessary allowances for condition of the substrate, temperatures, jobsite conditions, waste, overspray, etc.

TYPICAL PROPERTIES -WET

Solids by Volume:	100%
Weight per Mixed Gallon:	12.5 LBS
Pot Life @ 75°F:	20 to 25 min*
Cure Times @ 75°F:	Dry to Touch: 6 hrs
Firm:	12 hrs
Chemical Service:	36 hrs
Primer:	Concrete – Primer 75 Primer not required on properly prepared steel
Flammability:	Nonflammable

*Significantly less at elevated temperatures

TYPICAL PROPERTIES -CURED

Color:	Off-White, gray, red
Hardness- ASTM D-2240 Shore D:	79
Compressive Strength -ASTM C-579:	15,500 psi
Tensile Strength -ASTM D-638:	9,000 psi
Flexural Strength -ASTM D-790:	11,000 psi
Bond Strength -ASTM D-4541:	Concrete: concrete failure Steel: 1,600 psi
Permeability:	0.004 perm. - in.

STORAGE AND SHELF LIFE

Keep TL-81 AR components tightly sealed in their original containers until ready for use. Store at 50°F to 75°F out of direct sunlight. Blome TL-81 AR has a shelf life of one year, when properly stored.

TEMPERATURE CONSIDERATIONS

The temperature of the surface to be coated and the ambient air temperature should be at least 55°F while applying TL-81 AR and while it cures. If you attempt to apply TL-81 AR in cooler temperatures, tarp and heat the area to be coated to maintain the minimum 55°F conditions.

Stop application if the temperature falls within 5°F of the dew point.

Out gassing bubbles may appear in TL-81 AR if it is applied over concrete, particularly in direct sunlight, or when air and substrate temperatures are rising. This is due to the expansion of air and/or moisture trapped in the concrete. It is especially true of air-entrained concrete. For best results, shade the work area and apply TL-81 AR when the temperature of the concrete substrate is falling. A surface thermometer must be used to frequently monitor substrate temperature.

Twenty-four hours before application, all materials (components A and B) should be stored at a 75°F to 85°F, to facilitate handling and spraying.

SURFACE PREPARATION -GENERAL

Surfaces must be dry and free of dust, dirt, grease, oil, chemicals and contaminants immediately prior to applying each coat of either primer or TL-81 AR.

SURFACE PREPARATION OF STEEL

1. Abrasive blast steel surfaces to white metal finish with a 2 to 3 mil anchor profile. (Ref. SSPC-SP-5)

2. All welds should be continuous and should be ground to remove all sharp edges, laps, under cuts and other surface irregularities. Relatively smooth, ripple finished welds are acceptable. Stripe coat all welds just prior to applying coating.

3. Steel in Non -Immersion Service
   Abrasive blast steel surfaces to a near white metal finish with I to 2 mil anchor profile. (Ref. SSPC-SP-10)

MASKING

Mask surfaces that are not to be coated. TL-81 AR is difficult to remove, once cured.

PRIMING

Steel -priming not required. Blome Primer 75 recommended on concrete.

APPLICATION EQUIPMENT

TL-81 AR may be applied using a spray rig, brush or notched trowel. Use a plural component airless spray rig such as a Graco 45:1 King airless spray rig or Graco Hydro-Cat fixed at a 4:1 volumetric ratio.

CARE OF SPRAY RIG HOSES

Take care to prevent the mixed material from setting up in your hoses. For best results, keep hoses as short as possible; purge hoses immediately if work is interrupted. Keep hoses out of direct sunlight and insulated or away from hot surfaces.

MIXING AND APPLICATION

The mix ratio of Part A to Part B is 4:1 A to B by volume.

1. The components must be individually mixed immediately prior to use:
   Part A: Blend Part A component to a uniform consistency in its individual container, using a Jiffy type mixer.
   Part B: Blend Part B component to a uniform consistency in its individual container.

2. If you are using plural component equipment, skip this step. Otherwise:
   Pour the entire contents of Part B into the container holding Part A and mix thoroughly for two minutes using a Jiffy type mixer. The temperature of the mixed material should be 75°F to 85°F for hot potting. The pot life of the mixture will be approximately 20 to 25 minutes at 75°F; significantly less time at elevated temperatures. The longer the material is in the bucket after mixing, the shorter its pot life. Therefore, use immediately once mixed.

3. If applying with a plural component spray rig:
   Pour the remixed Part A and Part B components into their respective hoppers on the rig. Circulate the separate components through their hoses until both reach the correct temperature for plural spray. Part A should be at 100°F, and Part B should be at 90°F.

4. Material should be applied in even coats. If spraying, use multi-directional passes to ensure positive coverage and proper film build.

5. Horizontal Surfaces
The entire thickness may be applied to horizontals in a single coat.

6. Vertical Surfaces
Minimum of 15 mils up to 50 mils may be applied to vertical surfaces.

7. Spark Testing Steel
Spark testing is recommended for coated steel in immersion service. Test at 100 volts per mil.

8. Prepare surfaces for inter-coat adhesion as follows:
Allow TL-81 AR to cure until firm before applying subsequent coats. After the surface cures firm to the touch, but less than 24 hours, it must be washed with soap and water, rinsed and dried before re-coating.
Surfaces cured beyond 24 hours must be washed with soap and water, rinsed, dried and lightly sanded or abrasive blasted.

9. If work is interrupted, or at the end of the day, terminate the coating in a straight line.

10. As it cures, TL-81 AR will sometimes develop a thin, oily film on its surface. This film may be easily removed by washing with soap and water.

CLEANUP

Before material gels, tools and equipment should be cleaned using hot, soapy water. After TL-81 AR begins to cure, thinners will be required. Chlorinated solvents may be used if flammable solvents are prohibited.

SAFETY PRECAUTIONS
FOR INDUSTRIAL
USE ONLY

Avoid contact with skin and eyes; do not ingest material or inhale vapors. When working with TL-81 AR, always wear chemical goggles, appropriate rubber gloves, and other appropriate safety clothing. When spraying in confined areas, wear a fresh air hood and make provisions for forced air ventilation. When spraying in open areas, a NIOSH approved respirator suitable for organic vapors can replace fresh air hood. Before use refer to Blome Safety Data Sheets for individual components.

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 there with 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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