



DIATHANE LT MORTAR

*Special Urethane Mortar for
Low Temperature Applications*

1. Product Description

a. Basic Use: Diathane LT Mortar is a urethane and natural aggregate system used to protect horizontal surfaces against abrasion and chemical attack in low temperature environments. It is usually applied to concrete floors in need of repair due to excessive wear and chemical attack. Diathane LT Mortar may be applied when ambient and substrate temperatures are as low as 10°F (-12°C).

b. Features/Benefits:

- Formulation of urethane and specially graded natural silica aggregate for compliance with VOC regulations.
- Mortar consistency may be used on ramps and sloped floors.
- Excellent adhesive properties permit bonding to most substrates.
- Versatile product formulation permits use as total floor overlay or for small floor or joint repairs.
- Quick setting formulation may be used to set hand rails, dowels, rebar and other anchors in concrete.
- Rapid setting times and very high early age strengths allow floor to be placed into service 1 hour after application when applied at 70°F.
- Variable application rates permit use from a feathered edge to several inches thick.
- Contains no volatile solvents, permitting interior applications with virtually no fire hazard or toxic odors.
- Easy clean-up with soap and water.

c. Typical Applications: Freezers, cold storage rooms, cold weather anchor grouting, food processing plants, concrete repair/restoration, chemical processing plants, dairies, bottling plants and breweries.

d. Limitations: Diathane LT Mortar should not be used at temperatures above 140°F (60°C). Do not use outside as an overlay material. Very short pot life - Apply material within 3 minutes of mixing. It is best to use this material in small batches at a time due to the quick set properties.

e. Composition: Diathane LT Mortar is a multi-component system consisting of a urethane polymer and a prepackaged, specially graded and selected natural silica aggregate.

f. Color/Appearance: Diathane LT Mortar will cure to a concrete gray color.

2. Packaging

Diathane LT Mortar is supplied in either a 1-quart kit that includes 1-quart of urethane liquids and 12.50 pounds of aggregate. This product is also packaged in a 1-pint kit that includes 1-pint of urethane liquids and 6.25 pounds of aggregate.

| <i>Unit Size</i> | <i>Binder</i> | <i>Activator</i> | <i>Natural Aggregate</i> | <i>Shipping Wt.</i> |
|------------------|-----------------|------------------|--------------------------|---------------------|
| <i>1 quart</i> | <i>1 pint</i> | <i>1 pint</i> | <i>12.50 lbs.</i> | <i>15 lbs.</i> |
| <i>1 pint</i> | <i>0.5 pint</i> | <i>0.5 pint</i> | <i>6.25 lbs.</i> | <i>7.5 lbs.</i> |

3. Estimating/Coverage

Estimating information is shown below:

| <i>Unit Size</i> | <i>Yield</i> |
|------------------|--|
| <i>1 pint</i> | <i>0.05 cubic feet (86.5 cubic inch)</i> |
| <i>1 quart</i> | <i>0.10 cubic feet (173 cubic inch)</i> |

4. Technical Data

a. Tensile Strength: ASTM D 638, 28 days; 4,500 psi (31 MPa).

b. Compressive Strength: ASTM C 109, 2 in. (50 mm) cubes: 4,400 psi (30.3 MPa)

c. Ultimate Elongation: ASTM D 638; 5.5%.

d. Bond Strength: 9,000 psi - Concrete Failure

e. Shore D Hardness: 71

5. Directions for Use

a. Preparation: The surface to be patched or overlaid must be physically and structurally sound, thoroughly clean, free of oil, curing compounds or other deleterious materials that may prevent adhesion. New concrete must be thoroughly cured for at least 28 days before starting surface preparation. Concrete should be mechanically roughened or abraded by shot-blasting or scabbling equipment. An exposed aggregate surface is required for good bonding. All loose particles must be removed by vacuuming or flushing with compressed air and water.

b. Mixing: Thorough blending of all components is essential. Use a power drill with a mixing paddle. Diathane LT Mortar has a 1:1 liquid mix by volume. Mix only an amount of material that can be placed in 1 to 3 minutes. Mix the liquids for 15 to 30 seconds and immediately add the aggregate. Mix well so that all aggregate is coated.

c. Priming: This product is self-priming. If desired, apply a small amount of the mixed liquid (no aggregate) to the base concrete as a primer immediately followed by the aggregate and liquid repair mortar.

d. Silica Aggregate and Liquid Mixing: After the binder and activator are completely mixed, add all the aggregate to the liquid compound and mix until all the aggregate is thoroughly coated with urethane. The Metco Batch Mixer, which utilizes a 5-gal. (18.9 liter) pail, is ideal for efficient mixing of the aggregate with the urethane resin.

e. Application: Distribute the mixed mortar onto the area to be overlaid. The mortar may be placed with a trowel or float. For thicker applications, it is good practice to use screed bars or rails for a uniform finished surface free of high and low areas. Extreme care should be exercised to leave the surface free of trowel marks, ridges, and other imperfections.

f. Cure Time at 32°F (0°C): Diathane LT Mortar will harden in 4 hours at 32°F (0°C) but must be protected from moisture and traffic for at least 6 hours. The floor is then ready for service. Re-routing traffic for 24 hours is preferred, if possible.

g. Cure Time at 70°F (21°C): Diathane LT Mortar will harden rapidly and can take light foot traffic in 20 minutes. Diathane LT Mortar can be topcoated in 1 hour and can take heavy traffic in 1 hours at 70°F (21°C).

h. Clean-Up: Either DL Solvent or Waterzall Concentrate and warm water may be used for cleaning tools and equipment.

i. Maintenance: Diathane LT Mortar surfaces should be cleaned with a Waterzall Concentrate and water solution. Waterzall Concentrate may also be used at full strength to remove built-up deposits and stains. Diathane LT Mortar may be reapplied to itself.

6. Availability

Diathane LT Mortar is normally available from your local distributor or will be shipped within 5 working days upon receipt of order. Please contact your local Metalcrete representative or call Metalcrete directly for more information.

7. Warranty

Diathane LT Mortar is manufactured in strict accordance with the quality control standards of Metalcrete Industries. It is guaranteed to perform as indicated on this data sheet when applied by competent applicators.

8. Technical Service

Metalcrete Technical service representatives are available to provide on-site assistance with a minimum three day notice



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