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Architectural Concrete Solutions

Technical Bulletin

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June 2009

BOMANITE FLEXIBLE REPAIR MORTAR

PRODUCT DESCRIPTION

A) Composition and Typical Uses

Bomanite Flexible Repair Mortar is high strength polymer-modified cement flooring underlayment. This two-component system is a water-based resin material combined with a cement and graded aggregates powder and applied in a series of coats to achieve a smooth surface. In itself, the material is waterproof, but for positive protection against moisture Bomanite Waterproof Membrane should be applied prior to Bomanite Flexible Repair Mortar application. Bomanite Flexible Repair Mortar can be installed over concrete, metal or wood surfaces. Applications over wood may require installation of expanded metal lathe mechanically fastened to the substrate floor. Use of crack isolation sheeting is recommended at seams. Consult The Bomanite Company for detailed specifications for wood surfaces. Thickness of Bomanite Flexible Repair Mortar is from 1/4 inch up to several inches and can be pitched to create slope. Suitable for installation in exterior applications.

Apply Bomanite Flexible Repair Mortar when extra strength is required; such as over substrates that require builds, pitches or patching. Because Bomanite Flexible Repair Mortar incorporates polymers that are blended and linked with cements and aggregates, the applications are generally preferred over wood or other forms of substrates that might foster a very minimal amount of deflection in plane.

B) Advantages and Limitations

Advantages

- Monolithic, including integral base where specified
- Resistant to many chemicals (see chemical resistance table)
- Can be installed over wide range of new and existing surfaces with excellent adhesion
- No toxic odors during installation
- Low burning rate and negligible smoke production

Limitations

- Not designed for constant heavy steel-wheeled trucking
- If sub-surface cracks, Bomanite Repair Mortars reflect cracks to some degree

PHYSICAL CHARACTERISTIC AND TECHNICAL DATA

Compressive Strength

ASTM C-109 (2" x 2") cubes 5,450 psi

Resistance to Heavy Rolling Load

Test Standard #1-39T (2" wide cast iron wheel with 500 lb. load, 500 strokes; test run both on dry sample and sample immediately after immersion in water for 24 hours).

Dry - .002" indentation

Wet - .005" indentation

Indentation Characteristics

(Impacted Load)

MIL-D-3134, Para. 4.7.3

2 lb. steel ball dropped from an 8-foot height

0.034" indentation

No cracking or loosening

Surface Hardness

ASTM D-240-68 (Durometer) Scale "D" 80

Adhesion

MIL-D-3134, Para. 4.7.14

(Shear from steel plate after 96 hours)

301 psi

Indentation Characteristics

(Steadily Applied Load)

MIL-D-3134, Para.4.7.4.2.1

(2,000 lbs. on 1" steel ram imposed for 30 minutes)

1.04%

Tensile Strength

ASTM C-190

889 psi



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Flammability

NFPA 101-88 Life Safety Code*
Class 1 Interior Floor Finish
*Critical radiant flux-minimum of 0.45 watts per square
centimeter – (watts/cm²)
NFPA Test Method 253-84 1.07 watts/cm²

Specific Optical Density (DM)
NFPA Test Method 258-89
Thermal exposure; Flaming 110.7

Resistance to Elevated Temperatures

MIL-D-3134, Para. 4.7.5.1 No flow or slip

Coefficient of Thermal Expansion

ASTM C-531 2.82 x 10⁻⁶

Flexural Strength

ASTM C-790 2,496 psi

Water Absorption

MIL-D-3134, Para. 47.8 2.81%

Electrical Conductivity

Di-electric

MAINTENANCE

After period of sustained abrasive wear, floors may require a repeat maintenance coat or final-finish dressing. When subjected to repeated heavy impact loads, Bomanite Flexible Repair Mortar can require inspections and repairs to maintain original integrity.

SPECIFICATION ASSISTANCE

Consult The Bomanite Company for specification assistance, detailing, etc. This consultation is highly recommended prior to specification.

WARRANTY

This product is warranted to meet uniform quality standards within conventional manufacturing tolerances. Since no control is exercised over product use, no warranty or guarantee, expressed or implied, can be made to such use. Seller's and manufacturer's obligation under this warranty is limited to reimbursement of the purchase price of the portion of the product proven to be defective. The user assumes all risks and liability resulting from the use of this product.