Technical Datasheet

PrimeCem MSM

Microsilica mortar

Description

PrimeCem MSM (Microsilica Mortar) is a blend of Portland cement, graded silica sand, fibers and silica fume. The mortar may be hand or spray applied. A nominal thickness of 1/4" up to 2". Thicker applications can be achieved by applying in successive lifts. Uses include repairing concrete walls, ceilings, lining brick or concrete manholes and lift stations and horizontal pipe repair. Microsilica Mortar provides an extremely dense matrix and will accept coatings at earlier ages than typical Portland cement repair products. This product contains a migrating corrosion inhibitor.

Surface Preparation

Remove all loose concrete, brick or mortar from affected area by mechanical means. Surfaces shall be free of paints, oils, dirt, dust, curing compounds, sealers, form release agents or any material that would prevent mortar from coming into contact with the open pores of the concrete. Create a minimum surface profile for the system specified in accordance with the methods described in ICRI No. 03732 to achieve profile CSP-3 to CSP-9. Shot blasting, sandblasting, chipping and high pressure water blasting are all excellent surface preparation methods. Dampen area to achieve a saturated, surface dry condition (SSD). Leaving no puddles.

Mixing & Application

NOTE: The material will flash set if contaminated with calcium aluminate cement

Make sure all equipment for mixing, pumping, etc. are free from any calcium aluminate cement or products that contain calcium aluminate cement. Begin by adding 1 gallon clean water to mixing vessel and then add 1 bag (50#) Microsilica Mortar. Adjust water as needed (up to 1.4 gallons) to provide proper consistency for placing by hand or pump sprayer. Apply in successive lifts to desired thickness. Use brush, float or trowel to achieve desired texture.

Curing

Damp curing or use of a curing compound, that complies with ASTM C-309, may be necessary to prevent rapid drying of mortar. Curing compounds may need to be removed prior to coating. Replace manhole cover as soon as troweling is finished.

Technical Information

Typical Engineering Data

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

COMPRESSIVE STRENGTH ASTM C-109	
24 Hour	4,310 psi
7 Day	6,000 psi
28 Day	10,000 psi

FLEXURAL STRENGTH ASTM C-293	
24 Hour	720 psi
7 Day	850 psi
28 Day	1695 psi

MODULUS OF ELASTICITY ASTM 469-02	
24 Hour	4,310 psi
7 Day	6,000 psi
28 Day	10,000 psi

SPLITTING TENSILE ASTM C-496	
24 Hour	420 psi
28 Days	805 psi

Shrinkage (ASTM 596) - 28 day:	(0.001)
Bond Strength (ASTM C882 (modified)) - 28 Day:	2500 psi
Chloride Permeability (ASTMC-1202) - 28 Day:	205 Coulombs
Freeze / Thaw (ASTM C-666) - 300 cycles:	No Damage
Unit Weight:	128.3 PCF

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Packaging
50 lb. / 27 kg multiwall bags

Precautions
Contains Portland cement. Avoid eye contact or prolonged contact with skin, Wash thoroughly after handling. In case of eye contact, flush with water for at least 15 minutes. Consult a physician immediately. Keep out of reach of children. Contains free silica- DO NOT breathe dust. May cause delayed lung injury. Follow OSHA safety and health standards for crystalline silica (quartz). See material safety data sheet for detailed information.

Spills
Collect in appropriate container. Uncured material may be removed with water.

Disposal
Dispose of in accordance with local, state or federal regulations.

Limitations
Ambient and surface temperatures must be 38°F (3.33°C) and rising during application. Protect from rain until initial set has been achieved. To avoid flash setting, Do Not contaminate PrimeCem MSM with Hydraulic cement or PrimeCem CAM.

Minimum thickness:	¼ inch
Maximum thickness:	4 inches in successive applications

Storage and Handling
Shelf life: 12 months in the original unopened container.
Storage: Store in a dry area away from direct sunlight. The product should be conditioned to between 40 and 95°F (4.44 and 35°C) before use.

Clean-up
Tools and equipment

Health & Safety
Safety: See SDS for safety precautions. Use approved personal protective equipment (PPE), incl. safety glasses, gloves and confined space equipment/ procedures if applicable. Avoid skin contact; do not ingest. For professional use only.

First Aid:
Eye Contact: Immediately flush with large amounts of water. Seek medical attention.
Inhalation: Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
Ingestion: Seek medical attention immediately.
Skin Contact: Wipe off contaminated area. Wash with soap & water.

Warranty & Disclaimer
Prime Resins Inc. warrants their products to be free from manufacturing defects and that products meet the published characteristics when tested in accordance with ASTM and Prime Resins standards.

No other warranties are expressed or implied, including no warranty of merchantability or fitness for a particular purpose.

The Manufacturer will not be liable for damages of any sort resulting from any claimed breach of warranty since it has no control over how the products are used and applied.

The Manufacturer's liability under this warranty is limited to replacement of material or refund of sales price of the material. There are no warranties on any product that has exceeded the "shelf life" or "expiration date" printed on the package label.

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