

Reliner MSP® Cement

Structural Repair Mortar



GENERAL

Reliner MSP® Cement is a factory blended, packaged cement for new and existing sewer manholes. Reliner MSP® Cement is formulated with our patented microsilica technology, pozzolan, fly ash binders, and select admixtures for restoring structural integrity, stopping water infiltration and protecting against corrosion in sewer manholes, concrete pipes, lift station wet-wells, corrugated metal pipes, dams, tunnels, and water treatment plant structures.

APPLICATIONS

The original “**Sustainable Green Technology**” Reliner MSP® Cement is a wet [dry] gunned shotcrete mortar for making HVO surface repairs in concrete and masonry. The cement contains polymers and polypropylene fibers to produce an abrasion resistant trowel-grade cement lining. The Reliner MSP® Cement also offers advantages including build-back up to 4-inch thicknesses in one pass and increased freeze thaw durability and resistance to de-icing salts.

PROTECTION LEVELS

Comprised primarily of cement and microsilica powder, the Reliner MSP® Cement provides permeability reduction and Geopolymer binders to protect against aggressive chemicals found in damp sewer including hydrogen sulfide gas, sulfates, salt water, chlorides, water vapor, oils, grease, gases and dilute acids to pH 1.25.

COVERAGE

7.4 ft² at 1-inch thickness

14.8 ft² at ½ -inch thickness

Yield = 0.68 cubic feet per 75 lb. bag (wet)

MIXING

Mix with clean, potable water. Do not add Portland cement, admixtures or other ingredients.

STORAGE

Store product in a dry cool place. The cement is stocked in a 75-lb double paper lined bag.

PROPERTIES

Method: wet [dry gunite] applied shotcrete
Working time: 150 minutes at 73°F
Density: 135 ± 2 pcf
Mixes: Trail batches are recommended.
 Contact Standard Cement Materials, Inc. for help with trail mixes.

TECHNICAL INFORMATION

Property	psi		
Compressive Strength ASTM C 109	24-h 2,660	7-d 7,000	28-d 10,000
Splitting Tensile Strength ASTM C 496			705
Flexural Strength ASTM C 293	1,215		1,855
Bond Strength/ Slant Shear ASTM C 882	2,730		
Modulus of Elasticity ASTM C 496/ C 469M	3,770,000		
Shrinkage at 50% ± 4% RH ASTM C 596	-0.131%		
Chloride Permeability AASHTO T 277 ASTM C 1202			very low very low
Sulfate Resistance-90 days: ASTM C 267			Good
2,000 ppm (sulfuric acid)			Slight scaling
20,000 ppm (sulfuric acid)			
Unit Weight	135 ± 2		

CURING

Protect the Reliner MSP® Cement to minimize effects from hot weather extremes, sunlight, freezing and air movement. Avoid potential problems resulting from shrinkage cracking. Follow ACI 302, 308 and 305 guidelines to ensure that problems caused by decreased bleeding are minimized. Cure immediately as soon as the surface begins to harden, cover with wet burlap coverings, plastic sheets or use an

acceptable liquid membrane-forming curing compound per ASTM C 309. The curing compound shall contain a minimum of 25% solids and prevent a maximum loss of water up to 0.4-kg/m³ in 72 hours. Apply the curing compound in layers while the cement is still soft. Allow to cure approximately 4-½ to 24-hours. The ambient temperature and job conditions will govern specific cases, however, normal curing is adequate, but, in some situations such as hot or cold weather, special care is sometimes needed. Therefore, it is important to keep the concrete moist and at a favorable temperature during the early hardening period. Make no application when the ambient temperatures are less than 40°F or freezing temperature is expected within 24-hour.

SAFETY

Clean with soap and water. Rinse tools before cement hardens. Contains Portland cement- avoid eye contact and prolong exposure. May Cause Eye and Skin Irritation. Wash thoroughly after handling. In case of eye contact, wash immediately for 15 minutes, if skin problems arise, flush and get medical help. Do not breathe dust, use eye protection. Contains free silica and may cause delayed lung injury. Follow OSHA safety standards for crystalline silica (quartz). See MSDS sheet for information. Keep out of reach of children.

TECHNICAL SERVICE

The manufacturer provides on-site technical support upon request. Please contact us for questions and specialty applications not listed here.

WARRANTY INFORMATION

Standard Cement Materials, Inc. offers this information for the user's consideration. The corporation warrants this product to be of good quality and free from material defects. The manufacturer's liability and sole obligation and the Buyer's single remedy in connection with the

product shall be limited, at its option, to either replacement of the product not conforming to this warranty or credit to Buyer's account in the amount of the invoice price. Report all claims to guarantor within 30-days from the application date. The manufacturer reserves the right to determine whether any claim is specifically related to another cause. The corporation makes no other warranties, either expressed or implied and in no event intends to infringe on any established patents or trademarks.

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