

PLS-507 Microsilica Cement Manhole Liner

Description

PerpetuCrete^{MSC}™ cementitious mortar specifically designed to structurally repair and reline brick or concrete water and waste water structures. It is formulated for high early strength with reactive polymers, fibers and other ingredients to facilitate workability for vertical placement. It can be used as a stand alone liner or can be top coated with high performance coatings and liners within one or two days of application. PerpetuCrete^{MSC}™ is a highly impermeable, low shrinkage liner that fuses 100% to the host structure.

Typical Uses

On vertical or horizontal surfaces in new or existing structures to stop infiltration and corrosion, repair structural damage, and seal around pipe joints in brick or precast structures, such as:

- Manholes
- Lift Stations
- Clarifiers
- Digesters
- Tanks
- Large Diameter Cement Pipes
- Chemical Troughs
- Wastewater Facilities
- Secondary Containment
- Shotcreting
- Structural Restoration

Physical Properties

Compressive Strength: ASTM C-109

1 Day	4,310 PSI
7 Days	6,000 PSI
28 Days	> 9,000 PSI

Split Tensile**	ASTM C-496	570 PSI
Flexural Strength**	ASTM C-293	> 1,000 PSI
Bond Strength**	ASTM C-882	> 1,000 PSI
Shrinkage 90%RH	ASTM C-596	-0.068
Chemical Resistance:	ASTM C-267	
90 Days - 2000 ppm Sulfuric Acid		+ 0.26

** Test Result at 28 days

Typical Installation Thickness: .25 - 2 Inches
Color: Grey

Packaging

65 pound Bags

Coverage

13.7 sq. ft per 65# bag at .5", 0.57 cubic feet per bag

Thinning

Do not unapproved admixtures or additives

Components & Mix Ratio

Dry cement powder. Mix with 1.1 to 1.5 gal. of clean water

Cure Time

See Physical properties

Application

Surface Preparation: Prior to application, surface must be free of any existing coatings, surface treatments, surface contaminants, loose materials, and weak materials. Host structure must be structurally sound. All active and potential infiltration must be stopped. Surface shall be cleaned with a 4,000 PSI pressure wash to remove any surface contaminants. Where pressure washing is insufficient to remove surface contaminants, abrasive blasting shall be used. After abrasive blasting, the surface shall be cleaned again with a 4,000 PSI pressure wash. It is recommended to remove all stairs and unnecessary fixtures.

Mixing - Hand Application: Cement and water should be combined in to a clean disposable bucket and mixed using a cement mixing blade until completely mixed. Mix should be checked for dry pockets of unmixed cement.

Mixing - Spray: Cement and water shall be combined into a mechanical mixer in batches before transferring into pump hopper

Application (cont.)

Application: Apply in successive lifts with a trowel or a sprayer to reach specified thickness (with proper consistency, may be applied up to 3" thickness in a single pass). Use brush, float or trowel to achieve the proper finished texture. Substrate should be between 32°F and 90°F. Do not apply if freezing temperatures are expected within 24hrs of application. Material may be chilled using ice as necessary to control temperature.

Curing: Allow to cure per typical ACI guidelines and practices. Wet cure or use an acceptable curing compound per ASTM C 309 as required.

Re-coat: Application is best when completed in one application, but there is no specified minimum or maximum re-coat time as long as surface meets previously stated surface preparation requirements.

Clean Up: Cleaning of tools can be performed by cleaning with water. To clean skin soap and water is recommended. Please read Safety Data Sheets for more health and safety information.

Shelf Life and Storage

Shelf Life: 12 Months from the Date of Manufacture

Storage: Material must be kept away from moisture and stored at room temperature.

Safety

Follow all local and national safety regulations. Always use appropriate industry safety techniques and equipment. Read and follow the safety information listed in the Safety Data Sheets. Do not use if you do not understand or can not comply with information provided on Safety Data Sheets, do not use this product. Contact us to obtain Safety Data Sheets.

Warranty

Protective Liner Systems, Inc. warrants its products to be free of manufacturing defects. Furthermore, Protective Liner Systems, Inc. warrants that **PerpetuCrete MSC™**, for a period of one (1) year from the date of installation, will meet the currently published physical properties when installed by a Certified Applicator

Information contained on this data sheet may change at any time. Protective Liner Systems, Inc. is not responsible for direct or indirect damages as a result of changes to this data sheet and reserves the right to make such changes at anytime without prior notification.