

# Structural Repair Mortar



## Product Information

### DESCRIPTION

The Structural Repair Mortar is a high early strength material consisting of a dry, factory blended, densified microsilica and Portland cement, finely defined pozzolanic materials, highly reactive polymers, and other selective admixtures. This product can be hand or spray applied from ½" to 4" in thickness with one application and is designed to provide corrosion protection in pH levels ranging from 2-11, as well as excellent abrasion resistance. Common uses include, but are not limited to manholes, lift station/wet well, valve vaults, large diameter pipe, storm sewer, box culverts, water clarifier walls, head works sections, and other water/wastewater treatment plant structures.

### PACKAGING

Available in pallet and truck load quantities in 60 pound polyethylene lined bags.

### COVERAGE

12.56 Square feet ½" thickness  
6.28 Square feet 1" thickness

### STORAGE & HANDLING

The shelf life of this material is 12 months in original unopened containers. Cement should be stored in a dry area away from direct sunlight. The product should be conditioned to a temperature range between 40° F and 95° F before use.

### SURFACE PREPARATION

Clean the repair area thoroughly. Remove all of the loose concrete, dirt, oil, grease, dust, curing compound, existing paint/polymer products or any other deleterious material that may prevent the Structural Repair Mortar from bonding. This can generally be achieved with a high pressure water blast (Minimum 3500 to 5000 PSI) at close range with a zero degree rotating nozzle attached. In some cases it may be necessary to use heated water, degreasers (or other cleaning chemicals), acid etching or sand blasting to remove contaminants from the substrate. All active infiltration must be stopped prior to application of cement. For questions about proper surface preparation or specific application procedures please contact a Manhole Rehab, Inc. representative.

### TECHNICAL DATA

Physical Properties	PSI		
Compressive Strength	24-hr	7-day	28-day
ASTM C 109	>4,000	>6,000	>10,500
Tensile Strength			
ASTM C 469	>350	*	>800
Flexural Strength			
ASTM C 293	>650	*	>1,500
Bond Strength			
ASTM C 882			2,500
Chloride Permeability			Coulombs
ASTM C 1202			<250
Shrinkage @ 90% RH			
ASTM C 596			0.00%
Freeze Thaw Durability			300 Cycles
ASTM C 666			No Damage

Test results obtained by an independent laboratory

**Application:** wet mixed shotcrete

**Work time at 70°F:** 120 Minutes

Note: Worktime of the material will vary based on the ambient/surface temperature at time of installation.

Note: This material will flash set if contaminated with calcium aluminate cement. Prior to application make sure that all equipment for mixing/pumping is clean and free of contaminants.



6009 West Parker Road Suite 149-282 Plano, TX 75093  
Phone: 214-785-6566 Fax: 214-705-3822

## MIXING

Make sure that all equipment for mixing/pumping is clean and free of contaminants. Begin by adding 1 gallon of clean water to mixing vessel and then adding 1 bag of Structural Repair Mortar. Adjust water as needed (up to 1.4 Gallons) to obtain proper consistency for placement. The exact amount of water that is required to attain the desired consistency may vary due to the ambient temperature and dew point.

## APPLICATION

Repair any invert or bench section that exhibit's visible damage, deterioration, or water infiltration. Stop all active infiltration prior to application of cement materials. Dampen the repair area, but do not allow the water to puddle. Place immediately using wet applied shotcrete method. Follow ACI 302 and 308 standards for placement and curing. Apply cement to a uniform thickness of ½" to 4" in thickness to the repair surface. A minimum of 1" thickness is required to achieve structural rehabilitation. After applying Structural Repair Mortar to the desired thickness the surface should be hand troweled to a smooth consistency that lowers both the porosity and permeability of the material.

Note: If the structure is to be coated with a polymer a brush finish may be required after troweling. Allow a minimum of 24 hours curing before applying polymers. Contact coating manufacturer for proper application and surface preparation procedures.

Note: Recommended thickness is designed for vertical and overhead surfaces only. For questions about specific applications please contact the manufacturer.

## CURING

Follow ACI 302, 305, 308, and hot weather concrete placement practices. Protect the wet cement during the curing process from hot/cold weather extremes, air movement, or direct exposure to sunlight. Ambient and surface conditions must be at least 40°F and rising during application of cement. Cement should not be applied if freezing conditions are expected within 24 hours of application. Wet cure immediately and cover with plastic

sheet or an acceptable membrane-forming curing compound per ASTM C 309. The

curing compound should contain a minimum of 25% solid and prevent a maximum loss of water of up to 0.4-kg/m<sup>3</sup> in 72 hours.

Apply the curing compound in layers as the cement is still soft. Allow the cement to cure for 4 ½ to 24 hours. The ambient temperatures and job conditions will govern specific cases. Normal curing is adequate but in some cases such as hot/cold weather, special care is sometimes required. It is important to keep the concrete moist and at a favorable temperature during the initial curing stages of the cement.

## CLEAN UP

Wash with soap and water. Rinse thoroughly

## SAFETY

Follow all of the safety precautions: May Cause Eye and Skin Irritation. Contains calcium based by products, free silica and other components. Do not breathe the dust. Use eye protection and avoid prolong exposure. In case of eye contact, wash with water immediately for 15 minutes, Wash thoroughly after handling. If skin problems arise, flush area with water and get medical help. May cause delayed lung injury. Follow OSHA Safety and Health Standards for crystalline-silica-quartz. See safety data sheet for detailed information. Keep out of reach of children.

## WARRANTY

Manhole Rehab, Inc. warrants its product to be free of defects in material and workmanship. We guarantee the uniformity of the product within manufacturer's specified tolerances. Manhole Rehab, Inc. will replace any product that is proven to be defective when applied in accordance with manufacturer's instructions. Manhole Rehab, Inc.'s obligation shall be limited solely to such replacement. There are no other warranties by Manhole Rehab, Inc. either expressed or implied.

Manhole Rehab, Inc.  
6009 West Parker Rd. Suite 149-282  
Plano, TX 75093  
214-785-6566

Email: [sales@manholerehab.com](mailto:sales@manholerehab.com)  
Product manufactured and distributed by Manhole Rehab, Inc.  
© All rights reserved. August 2012



6009 West Parker Road Suite 149-282 Plano, TX 75093  
Phone: 214-785-6566 Fax: 214-705-3822