

The Strong Company, Inc.

High Performance Mix

INTENT: To provide a system for reconstruction of concrete or masonry structures that stops inflow, infiltration, exfiltration, restores structural integrity and provides protection against hydrogen sulfide (biogenic) corrosion.

Strong-Seal® High Performance Mix is a 100% pure fused calcium aluminate with alkaline-resistant fiberglass reinforcement. Strong-Seal® High Performance Mix is specifically formulated for highly corrosive applications with a pH of 1.0 or higher, is used to form a structural monolithic liner covering all interior substrate surfaces, and shall have the following minimum requirements:

- A. Compressive strength
ASTM C109
> 9000 psi at 28 days
- B. Tensile strength
ASTM C496
> 800 psi
- C. Flexural strength
ASTM C293
> 1200 psi
- D. Shrinkage @ 95% R. H.
ASTM C596
0%
- E. Bond
ASTM C882
> 2000 psi
- F. Freeze/Thaw
ASTM C666
100 cycles, no visible damage

PACKAGING / YIELD

65lb bag
Yield .48 ft³ per bag

MIX WATER (APPROX.)

1.0 – 1.3 gallons per bag

DENSITY WET

150± 5 lbs. ft³

All foreign material shall be removed from the manhole wall and bench using a high-pressure water spray (minimum 3000 psi). Loose and protruding brick, mortar, and concrete shall be removed using a mason's hammer, chisel and/or scraper. Fill any large voids with quick setting patching material.

Active leaks shall be stopped using quick setting, specially formulated mixes according to manufacturer's recommendations. Some leaks may require weep holes to localize the infiltration during the application. After application, the weep holes shall be plugged with the quick setting mix prior to application of the final coat. When severe infiltration exists, drilling may be required to pressure grout using grouting procedures. Manufacturer's recommendations shall be followed when pressure grouting is required.

CURING

Caution should be taken to minimize exposure of applied product to sunlight and air movement. If application of additional coats is to be longer than 15 minutes, the structure shall be covered. At no time should the finished product be exposed to sunlight or air movement for longer than 15 minutes before covering or closing access. In extremely hot and arid climates manhole shall be shaded while reconstruction is in process. In environments where humidity level is below 70%, it shall be necessary to keep finished product damp for the first 72 hours.

The final application shall have the following hold time: storm run-off and surcharge - four (4) hours; force main impact – six (6) hours; traffic shall be withheld for 12 hours after application is complete.

WEATHER

No application shall be made to frozen surfaces or if freezing is expected to occur within the substrate within 24 hours after application. Precautions shall be taken to keep the mix temperature at time of application below 90 degrees F. Water temperature shall not exceed 80 degrees F. Chill with ice if necessary.

PRODUCT TESTING

Four 2 inch cubes may be cast each day or from every pallet of product used and shall be properly packaged, labeled and returned to the manufacturer for testing in accordance with the owner's or manufacturer's directions for compression strength per ASTM C109 procedure.



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