

Mainstay® ML-CA

Pure Calcium Aluminate Cement Mortar



FEATURES/BENEFITS

SUPERIOR CORROSION RESISTANCE	VERY LOW SHRINKAGE
HIGH EARLY AND ULTIMATE STRENGTH	HIGH FLEXURAL AND BOND STRENGTH
EASY TO USE AND FINISH	HIGH BUILD - UP TO 3" PER PASS
WATERPROOFS/DAMP PROOFS	RESTORES DETERIORATED SURFACES

PRODUCT DESCRIPTION

MAINSTAY® ML-CA is a ready to use pure calcium aluminate cement mortar specifically designed for rehabilitation of deteriorated concrete and brick structures in wastewater environments subject to biologically induced hydrogen sulfide (H₂S) corrosion. MAINSTAY ML-CA produces excellent adhesion to properly prepared existing concrete or brick surfaces, restores structural integrity, seals rough deteriorated surfaces and resists both external hydrostatic water pressure and repeated freeze/thaw. MAINSTAY ML-CA is suitable for permanent immersion in water, saltwater, oils, gases and many dilute acids.

MAINSTAY ML-CA can be used to repair floors, vertical and overhead surfaces of deteriorated concrete structures such as manholes, lift stations, sewer pipes, pits, sumps, trenches, tunnels, bridges, piers or any concrete structure that has experienced deterioration from exposure to aggressive environments.

PRODUCT DATA

COMPOSITION:

A ready to use pure calcium aluminate cement mortar.

COLOR:

Dark Grey.

YIELD:

0.625 ft³ per 75# bag when mixed correctly.

COVERAGE:

Approximately 7.5 ft² per bag at 1" or 15 ft² per bag at 1/2". Allowances should be made for waste.

RECOMMENDED THICKNESS:

Depends on the application. 1" is generally sufficient for smoothing concrete which has experienced surface attack (exposed aggregate). Minimum thickness is usually 1/2". Consult a Madewell Technical Representative for specific recommendations.

PACKAGING:

Normally stocked in 75 pound bags. Also available in 2,000# and 3,000# bulk sacks.

SURFACE PREPARATION:

Prepare surfaces to be repaired by water blasting, abrasive blast, hand or power tool to remove all unsound concrete, contaminants, dirt, debris and/or deteriorated reinforcing steel. Refer to the International Concrete Repair Institute technical guideline titled "Surface Preparation Guidelines For The Repair Of Deteriorated Concrete Resulting From Reinforcing Steel Oxidation" and/or contact your Mainstay Representative for information on removal techniques that are best for your application. Surfaces should have a minimum profile of 1/16" (preferably with aggregate exposed) and should be inspected for soundness prior to application of MAINSTAY ML-CA. Saturate all surfaces thoroughly with clean fresh water prior to application and allow to surface dry just prior to application of MAINSTAY ML-CA.

MIXING:

Add 1.25 gallons of fresh clean water per 75# bag. Mix thoroughly using a

gasoline, electric or hydraulically powered paddle-type mixer. Additional water, up to 1 quart per bag MAXIMUM, may be added to increase workability. However, physical strengths will be reduced accordingly. **Trial batches and pretesting of concrete materials are recommended before construction start up.**

APPLICATION:

MAINSTAY ML-CA can be applied by low to medium velocity wet mix shotcrete equipment (pneumatic spray) or by hand using a trowel. Application thicknesses up to 3" in a single lift are possible depending on the amount of water added, the condition of the surfaces being treated and jobsite conditions. A variety of piston, systolic and rotor/stator pumps may be used depending on job requirements and desired production rates. Consult a Mainstay technical representative for information regarding equipment that is best suited for your job.

Mainstay® ML-CA Pure Calcium Aluminate Cement Mortar**WORKING TIME:**

Approximately 30 minutes at 80° F. The working time will be extended somewhat at lower temperatures and shortened at higher temperatures.

FINISHING:

MAINSTAY ML-CA can be finished using a steel trowel, wood float, sponge float, broom or brush, depending on the surface texture desired.

CURING:

No special curing requirements are necessary when applied in moist subterranean structures. When placed under fast drying conditions (in direct sunlight, high winds or high temperatures) MAINSTAY ML-CA may be treated with a curing compound or wetted oc-

asionally during the first 24 hours of cure to slow the evaporation of mix water.

CLEAN UP:

Clean up equipment and tools with clean tap water.

STORAGE:

Store MAINSTAY ML-CA in a cool dry place.

SHELF LIFE:

6 months, when stored under cool dry conditions. Subject to reinspection thereafter.

SAFETY:

MAINSTAY ML-CA contains cements and chemicals which *MAY CAUSE EYE OR SKIN SENSITIZA-*

TION. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user is specifically directed to consult the current "Material Safety Data Sheet" for this product. When using this product in a confined space or closed area, consult the current OSHA or ANSI bulletins on safety requirements. Do not take internally. If swallowed, call a physician immediately.

WARRANTY

All technical data, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable and are intended for use by persons having skill and knowledge, at their discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by the Buyer whether as recommended herein or otherwise. Such recommendations, technical advice or services are not to be taken as a license to operate or intended to suggest infringement of any existing patent. MADEWELL PRODUCTS CORPORATION MAKES NO GUARANTEE OR WARRANTIES EXCEPT AS OTHERWISE PROVIDED IN WRITING, AND DISCLAIMS ANY AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Compressive Strength ASTM C 109	24 hours 7 days 28 days	>5,500 psi >7,000 psi >8,000 psi
Flexural Strength ASTM C 293	24 hours 7 days 28 days	>900 psi >1,000 psi >1,100 psi
Shrinkage @ 90% Relative Humidity ASTM C 596	24 hours 7 days 28 days	0% 0% 0%
Tensile Strength ASTM C 496	28 days	600 psi
Bond Strength ASTM C 1042	28 days	>3,000 psi