

# Mainstay<sup>®</sup> ML-72

## Sprayable Microsilica Cement Mortar



### FEATURES/BENEFITS

LOW PERMEABILITY	VERY LOW SHRINKAGE
HIGH EARLY AND ULTIMATE STRENGTH	HIGH FLEXURAL AND BOND STRENGTH
EASY TO USE AND FINISH	HIGH BUILD - UP TO 5" PER PASS
WATERPROOFS/DAMP PROOFS	RESTORES DETERIORATED SURFACES

### PRODUCT DESCRIPTION

**M**AINSTAY<sup>®</sup> ML-72 is a blend of special cements, microsilica, thermoplastic fiber, densifiers, admixtures and other modifiers that produces a high strength, low shrinkage and low permeability mortar for rehabilitation of deteriorated concrete structures. MAINSTAY ML-72 produces excellent adhesion to properly prepared existing concrete or brick surfaces. MAINSTAY ML-72 restores structural integrity, seals rough deteriorated surfaces and resists external hydrostatic water pressure. MAINSTAY ML-72 is suitable for permanent water immersion service.

MAINSTAY ML-72 can be used to repair floors, vertical and overhead surfaces of deteriorated concrete structures such as sewer pipes, pits, sumps, trenches, tunnels, bridges, piers or any concrete structure that has experienced deterioration from exposure to aggressive environments. This product is available with polymer additives, MAINSTAY ML-72B, for applications which do not remain continually wet during and after cure.

### PRODUCT DATA

#### COMPOSITION:

A proprietary mixture of special cements, silica fume, thermoplastic fibers and modifiers. (MAINSTAY ML-72B contains polymer admixture.)

#### COLOR:

Dark Grey.

#### YIELD:

.54 ft<sup>3</sup> per 65# bag when mixed correctly.

#### COVERAGE:

Approximately 6.5 ft<sup>2</sup> per bag at 1" or 13 ft<sup>2</sup> 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 65 pound bags.

#### 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-72. Saturate all surfaces thoroughly with clean fresh water prior to application and allow to surface dry just prior to application of MAINSTAY ML-72.

#### MIXING:

Add 1.3 gallons of fresh clean water per 65# bag. Mix thoroughly using a

gasoline or electric powered paddle-type mixer.

#### APPLICATION:

MAINSTAY ML-72 can be applied by low to medium velocity wet mix shotcrete equipment (pneumatic spray) or by hand using a trowel. Application thicknesses up to 5" 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 your Mainstay representative for information regarding equipment that is best suited for your job.

#### 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-72 can be finished using a steel trowel, wood float, sponge float, broom or brush, depending on the surface texture desired. If MAINSTAY ML-72 is to be top-coated, it is recommended that the surface be finished to a smooth, somewhat grainy texture using a sponge or wood float.

**CURING:**

If applicable, MAINSTAY ML-72 should be topcoated immediately after finishing, as soon as the surface becomes firm to the touch. If not top-

coated, MAINSTAY ML-72 should be kept moist with fresh clean water for the first 72 hours after placement.

**CLEAN UP:**

Clean up equipment and tools with clean tap water.

**STORAGE:**

Store MAINSTAY ML-72 in a cool dry place.

**SHELF LIFE:**

1 year, subject to reinspection thereafter.

**SAFETY:**

MAINSTAY ML-72 contains portland cement and chemicals which *MAY CAUSE EYE OR SKIN SENSITIZATION*. 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	1 day 28 days	3,000 psi 10,000 psi
Flexural Strength ASTM C293	1 day 28 days	535 psi 1,400 psi
Tensile Strength ASTM C-496	1 day 28 days	330 psi 790 psi
Shrinkage ASTM C-596	28 days @ 90%	0.01%
Bond* (uniaxial tension)	28 days	>500 psi

\*Uniaxial tensile bond strength should achieve a minimum of 1 Newton/mm<sup>2</sup> (145 psi) over a sound, properly prepared substrate. However, bond is highly dependent on degree of surface preparation and substrate strength.