

Mainstay® ML-72P™

(Formerly Mainstay ML-72F)

Polymer Modified Sprayable Microsilica Cement Mortar



FEATURES/BENEFITS

EXCELLENT BOND	VERY LOW SHRINKAGE
LOW PERMEABILITY	HIGH FLEXURAL STRENGTH
EASY TO USE AND FINISH	SMOOTH FINISH AT 1/8" TO 1/4" THICK
HIGH EARLY AND ULTIMATE STRENGTH	FILLS BUGHOLES AND IRREGULARITIES

PRODUCT DESCRIPTION

MAINSTAY ML-72P 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. **MAINSTAY ML-72P** produces excellent adhesion to properly prepared concrete surfaces. **MAINSTAY ML-72P** seals rough concrete surfaces, fills bugholes, and resists external hydrostatic water pressure. **MAINSTAY ML-72P** is suitable for permanent water immersion service.

MAINSTAY ML-72P can be used to smooth horizontal, vertical and overhead surfaces of new or deteriorated concrete structures such as pits, sumps, trenches, tunnels, culverts, bridges and piers. **MAINSTAY ML-72P** may also be used to restore concrete structures that require protection by application of **MADEWELL** or **MAINSTAY** corrosion barrier coatings.

PRODUCT DATA

COMPOSITION:

A proprietary mixture of special cements, silica fume, thermoplastic fibers, polymer admixture, and modifiers.

COLOR:

Dark gray.

YIELD:

0.625 cubic feet (ft³) per 65-pound (lb) bag when mixed correctly.

COVERAGE:

Approximately 30 square feet (ft²) per bag at 1/4". Allowances should be made for waste.

THICKNESS:

Depends on the application. Because of its high polymer loading, **MAINSTAY ML-72P** can be applied at thicknesses below 1/8" in a single pass. However, **MAINSTAY ML-72P** (like regular ML-72) can still be built up to several inches thick when job conditions require. Consult a Mainstay Technical Representative for specific recommendations.

PACKAGING:

Normally stocked in 65-lb bags. Also available in 2,000-lb and 3,000-lb bulk sacks.

SURFACE PREPARATION:

Prepare surfaces to be repaired by Low Pressure Water Cleaning (LP WC, 4,000 psi minimum), abrasive blasting, hand, or power tool cleaning to remove all unsound concrete, contaminants, dirt, debris, and/or deteriorated reinforcing steel. Refer to the International Concrete Repair Institute (ICRI) technical guideline titled *Surface Preparation Guidelines For The Repair Of Deteriorated Concrete Resulting From Reinforcing Steel Oxidation* and/or contact a Mainstay Technical Representative for information on removal techniques that are best for your application. Surfaces should have a minimum ICRI Concrete Surface Profile (CSP) #3 (preferably with aggregate exposed) and should be inspected for soundness prior to the application of **MAINSTAY ML-72P**. Saturate all surfaces thoroughly with clean water

and allow to surface dry just prior to the application of **MAINSTAY ML-72P**.

MIXING:

Add 1.5 gallons of clean water per 65-lb bag. Mix thoroughly using a gasoline, electric, or hydraulically powered paddle-type mixer. Additional water, up to 1 pint per bag **MAXIMUM**, may be added to increase workability. However, physical strengths will be reduced accordingly. **Trial batches and testing concrete materials are recommended before construction start up.**

WORKING TIME:

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

APPLICATION:

MAINSTAY ML-72P can be applied by low to medium velocity wet mix shotcrete equipment (pneumatic spray) or by hand using a trowel. **MAINSTAY ML-72P** can also be applied to round structures using spincasting

Mainstay ML-72P Fine Sprayable Microsilica Cement Mortar

equipment such as the Mainstay Mortar Spinner for vertical applications or the Mainstay Horizontal Spinner and Cable Puller for horizontal applications. Application thicknesses up to 1/2" in a single pass 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.

FINISHING:

MAINSTAY ML-72P can be finished using a steel trowel, wood float, sponge float, broom or brush, depending on the surface texture desired. If **MAINSTAY ML-72P** 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-72P** should be topcoated immediately after

finishing or as soon as the surface becomes firm to the touch. If not top-coated, 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-72P** may be treated with a curing compound or wetted occasionally 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.

DELIVERY & STORAGE:

Check containers for damage, and verify quantities before accepting shipments. Store **MAINSTAY ML-72P** in a cool dry place.

SHELF LIFE:

1 year, depending on storage conditions, subject to reinspection thereafter.

SAFETY:

KEEP OUT OF REACH OF CHILDREN.

FOR INDUSTRIAL USE ONLY.

MAINSTAY ML-72P contains portland cement and chemicals that *MAY CAUSE EYE, SKIN, RESPIRATORY, OR NERVOUS SYSTEM 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 Safety Data Sheet for this product. When using this product in a confined space or closed area, consult the current Occupational Safety and Health Administration (OSHA) or American National Standards Institute (ANSI) bulletins on safety requirements. Do not take internally. If swallowed, call a physician immediately. Keep away from open flame, and keep containers tightly closed when not in use.

WARRANTY:

All technical data, recommendations, and services are rendered by the Seller gratis. They are based on technical data that 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	2,500 psi 8,000 psi
Flexural Strength ASTM C-293	1 day 28 days	440 psi 1,310 psi
Tensile Strength ASTM C-496	1 day 28 days	280 psi 800 psi
Shrinkage ASTM C-490	28 days @ 90%	0.01%
Bond Strength ASTM C-882*	28 days	>500 psi

*Uniaxial tensile bond strength should achieve a minimum of 1 Newton/mm² (145 psi) over a sound, properly prepared substrate. However, bond is highly dependent on degree of surface preparation and substrate strength.