

**FLOW-LINER SYSTEMS, LTD.**  
**4830 North Pointe Drive**  
**Zanesville, Ohio 43701**

**DESCRIPTION:**

FLOW-LINER MICROSILICA MORTAR is a blend of Portland cement, graded silica sand, fibers and silica fume. The mortar may be hand or spray applied, usually from ½” to 2” in depth. Uses include repairing concrete walls, ceilings, lining brick or concrete manholes and lift stations, etc. Microsilica Mortar provides an extremely dense matrix and will accept coatings at earlier ages than typical Portland cement repair products.

**SURFACE PREPARATION:**

Remove all loose concrete, brick or mortar from affected area by mechanical means. Surfaces shall be free of paints, oils, dirt, dust, curing compounds, sealers, form release agents or any material that would prevent mortar from coming into contact with the open pores of the concrete. Shot blasting, sandblasting, chipping and high pressure water blasting (3500 PSI) are all excellent surface preparation methods. Smooth concrete surfaces may require etching with muriatic or sulfamic acid, then thoroughly cleaned with pressure washer. Dampen area to achieve a saturated, surface dry condition (SSD). Leaving no puddles.

**MIXING & APPLICATION:**

NOTE: [The material will flash set if contaminated with calcium aluminate cement.] Make sure all equipment for mixing, pumping, etc. are free from any calcium aluminate cement or products that contain calcium aluminate cement. Begin by adding 1 gallon clean water to mixing vessel and then add 1 bag (60#) Microsilica Mortar. Adjust water as needed (up to 1.4 gallons) to provide proper consistency for placing by hand or pump sprayer. Apply in successive lifts to desired thickness. Use brush, float or trowel to achieve desired texture.

**CURING:**

Damp curing or use of a curing compound, that complies with ASTM C-309, may be necessary to prevent rapid drying of mortar. Curing compounds may need to be removed prior to coating. Replace manhole cover as soon as troweling is finished.

**LIMITATIONS:**

Ambient and surface temperatures must be 38° F and rising during application. Protect from rain until initial set has been achieved. To avoid flash setting,

**1-800-348-0020**

Do Not contaminate MSM with Hydraulic cement, Rapid Cure Vertical, CAM.  
Minimum thickness: ½ inch  
Maximum thickness: 4 inches in successive applications

**STORAGE & HANDLING:**

- A. Shelf life:** 12 months in the original unopened container.
- B. Storage:** Store in a dry area away from direct sunlight. The product should be conditioned to between 40° F and 95° F before use.

**HEALTH AND SAFETY:**

**A. Health Precautions:** This product contains Portland cement and crystalline free silica. Avoid breathing the dust. Exercise care, as with handling any chemical construction product.

**B. Safety Precautions:** Use adequate ventilation. Use of a NIOSH/ MSA approved dust respirator, safety goggles and chemical resistant gloves are strongly recommended. Remove contaminated clothing immediately.

**C First Aid:** Skin Contact: wash thoroughly with soap and water. Eye Contact: flush immediately with water and contact a physician. Respiratory Problems: remove affected person to fresh air immediately and contact a physician. Hygiene: wash hands immediately after use. Wash clothing before reuse.

**D. Spills:** Collect in appropriate container. Uncured material may be removed with water.

**E. Disposal:** Dispose of in accordance with local, state or federal regulations.

**F. Warning:** KEEP CONTAINER CLOSED WHEN NOT IN USE.  
KEEP OUT OF REACH OF CHILDREN.  
NOT FOR INTERNAL CONSUMPTION.  
FOR INDUSTRIAL USE ONLY BY A QUALIFIED TECHNICIAN. Consult the Material Safety Data Sheet for further health and safety information.

**FLOW-LINER™ MSM**  
**Microsilica Modified Repair Mortar**

**PACKAGING:**

60 lb. / 27 kg multiwall bags.

**WARRANTY:**

We warrant our products to be free of defects and manufactured to meet published physical properties when cured and tested according to ASTM and FLOW-LINER standards. Under this warranty, we will provide, at no charge, product in containers to replace product proved to be defective, when applied in accordance with our written instructions and in applications recommended by us as suitable for this product.

All claims concerning product defects must be made within twelve months of shipment. Absence of such claims in writing during this period will constitute a waiver of all Claims with respect to such product.

This warranty is in lieu of any and all other warranties, expressed or implied.

**TECHNICAL DATA:**

**COMPRESSIVE STRENGTH**

ASTM C-109  
24 Hr. 2100 PSI  
7 Day 5500 PSI  
28 Day 9000 PSI

**SHRINKAGE**

ASTM 596  
28 Day (0.001)

**BOND STRENGTH**

ASTM C-882 (modified)  
28 Day 1695 PSI

**FLEXURAL STRENGTH**

ASTM C-293  
7 Day 605 PSI  
28 Day 960 PSI

**SPLITTING TENSILE**

ASTM C-496  
28 Days 640 PSI  
FREEZE/THAW  
ASTM C-666  
300 cycles – No Damage

Unit Weight 128.3 PCF