

Flow-Liner Systems, Ltd

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Zanesville, Ohio 43701

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FLOW-LINER CAM™ Calcium Aluminate Repair Mortar

DESCRIPTION:

FLOW-LINER Calcium Aluminate Mortar (CAM) is a blend of quartz silica, fibers and calcium aluminate cement. CAM can be hand or spray applied, usually from ½” to 2” in depth. Uses include repairing concrete walls and ceilings, lining brick or concrete man holes and lift stations, etc. CAM can be especially useful when coatings are required at early ages. CAM may be coated in as little as 12 hours. (Always consult with coating manufacturer). The acid resistance of the calcium aluminate cement is particularly well suited for the waste water industry.

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 Portland cement.] Make sure all equipment for mixing, pumping, etc. are free from any Portland cement or products that contain Portland cement. Begin by adding 1 gallon clean water to mixing vessel and then add 1 bag (60#) CAM. Adjust water as needed (up to 1.25 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, Do Not contaminate CAM with Hydraulic cement, FLOW-LINER MSM, Rapid Cure Vertical or ordinary Portland cement. 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 Calcium Aluminate 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.

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 (modified)

	Air cure	moist cure
12 Hr.	4500 PSI	3600 PSI
24 Hr.	5500 PSI	5150 PSI
7 Day	7400 PSI	7250 PSI
28 Day	9600 PSI	9000 PSI

SHRINKAGE

ASTM C-596	%
7 Day	(0.0100)
14 Day	(0.0165)
28 Day	(0.0310)

FLEXURAL STRENGTH
ASTM C-293

24 Hr.	655 PSI
7 Day	820 PSI
28 Day	1360 PSI

SPLITTING TENSILE
ASTM C-496

28 Day	650
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FREEZE/THAW
ASTM C-666

300 cycles – No Damage

BOND STRENGTH
ASTM C-882 (modified)

28 Day	1765 PSI
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Unit Weight 127.2 lbs/cf