

MortarTec Aluminate™



High Density, Calcium Aluminate Mortar

Item# RCHA2 Revised: 11/3/2009

Description

Epoxytec MortarTec Aluminate™ is a blend of quartz silica, fibers and calcium aluminate cement. MortarTec Aluminate™ can be hand or spray applied, typically from ½" to 1" in depth. Uses include repairing industrial concrete walls and ceilings, lining brick or concrete structures susceptible to corrosion (such as found in troughs, manholes, lift stations, etc). MortarTec Aluminate™ can be especially useful when coatings are required at early curing stages. MortarTec Aluminate™ may be coated in as little as 12 hours. (consult with coating manufacturer for recommended material capabilities).

Typical Uses

Any concrete and masonry surfaces where rehabilitation of an existing structure requires enhancement of the structural integrity and protectiveness.

- Industrial infrastructure repair / resurfacing
- Sanitary sewers / manholes / lift stations
- Wastewater treatment plants

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 (3,500 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.

Application Method

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#) MortarTec Aluminate™.

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.

Clean-up

Clean up is simple and easy with soap and water. Rinse tools before material hardens.

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 MortarTec Aluminate™ with other type cements.

- Minimum thickness: ½ inch
- Maximum thickness: 4 inches in successive applications.



MortarTec Aluminate™

Storage & Handling

- Shelf life: 12 months, sealed.
- Storage: Store in a dry area away from direct sunlight. The product should be conditioned to between 40° F and 95° F before use.

Packaging & Color

- 60 lb. / 27 kg multiwall bag (grey) Item# RCHA2-60

Coverage

Volume yields .45 cubic feet per 50 lb. bag.

Health & Safety

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.

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.

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.

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

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

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.

Technical Properties

Compressive Strength

ASTM C-109 (mod)

	<i>Air Cure</i>	<i>Moisture Cure</i>
12 Hours	5,900 psi	5,500 psi
1 Day	7,000 psi	6,730 psi
7 Days	10,120 psi	8,400 psi
28 Days	12,800 psi	10,670 psi

Shrinkage %

7 Days	(0.0100)
14 Days	(0.0165)
28 Days	(0.0310)

Bond Strength

ASTM C-882

28 Days	1,765 psi
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Flexural Strength

ASTM C293

1 Day	655 psi
7 Days	820 psi
28 Days	1,360 psi

Freeze / Thaw

ASTM C666

	300 cycles - no damage
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Unit Weight

	127.2 lbs/cf
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* Safety: Consult Material Safety Data Sheet for all material safety information.



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