



enDuratite™ CRYSTALLINE ADMIX

TECHNICAL DATA SHEET

enDuratite Crystalline Admix is a permanent waterproofing admixture. When added to concrete or mortar, insoluble crystals are formed and developed in the water-bearing capillaries of the mix. This effectively blocks the passage of water, ensuring permanent water tightness throughout the life of the structure. enDuratite Crystalline Admix can also be used in production of waterproofing mortars and surface applied slurry systems.

Moisture and lime within the mix combine with the active chemicals in the enDuratite Crystalline Admix to create a continuous barrier of insoluble crystals which penetrate deep into the capillary structure of the concrete. These capillaries and interstices are blocked to the passage of water, while permitting the transmission of air and water vapor, enabling the structure to breathe.

The rate of crystalline development varies with the variations in the mix design and curing regime of the concrete. However, the crystalline development is usually sufficient to provide full waterproofing properties approximately 7-10 days after placement.

enDuratite Crystalline Admix is equally effective against both negative and positive water or osmotic pressure. After the initial crystallization process has successfully waterproofed the structure or materials, the active chemicals within enDuratite Crystalline Admix remain dormant in the concrete or mortar to offer long-term protection. Any later contact with water will reactivate the sealing process.

KEY BENEFITS

- Waterproofs for the life of the structure.
- Maintenance free.
- No future re-application.
- Seals present and future cracks up to 1/64" (.4 mm).
- No VOC's

PHYSICAL PROPERTIES

- Provides excellent waterproofing properties by becoming an integral part of the structure.
- Protects concrete and reinforcement against corrosive waterborne substances.
- Crystalline action is reactivated by contact with water providing long-term additional protection.
- Effective against both positive and negative pressure.
- Non-toxic or tainting.
- Permits early backfilling without requirement for protection boards.
- Maintenance free.
- Bridges hairline cracks up to 1/64" (0.4 mm).

APPLICATION

enDuratite Crystalline Admix may be added to the concrete or mortar at either the batching plant or it can be added to the mixer at the job site. It is preferable that enDuratite Crystalline Admix be added to the dry mix to ensure even distribution prior to the addition of water. If enDuratite Crystalline Admix is added after the addition of water, mixing must continue for an additional 10 minutes prior to placement of the mix.

CONCRETE CURING

For proper curing of concrete when enDuratite Crystalline Admix has been used, effort must be made to prevent concrete from drying too fast. This means that the concrete should be kept wet for at least 7 days after the initial pour of the concrete. One method to accomplish this is mist spraying and then covering with polyethylene sheet or curing blankets. Additionally, to ensure proper curing, it is recommended that the surface of the concrete be protected from any adverse environment for the 7 day curing period. Do not use any chemical curing agents in combination with enDuratite Crystalline Admix unless approved or supplied by Alchemco.

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IMPROVED CONCRETE PROPERTIES

	CONTROL	enDuratite ADMIX	CHANGE
Initial Setting Time (hr:min)	5:50	7:50	2:00 delay
Final Setting Time (hr:min)	7:20	9:50	2:30 delay
Air Content (%)	1.50	1.50	No change
Slump (mm)	100	100	No change
Compressive Strength @ 28 days (MPa)	31.5	36	17.5% better
Drying Shrinkage @ 56 days	380	340	10.5% better
Water Permeability (m/sec)	9.5x10		93% reduction



WARNINGS



HAZARDOUS

May cause irritation to skin. May cause skin to have allergic reaction. May cause serious eye damage. May cause irritation to the respiratory system.

KEEP OUT OF REACH OF CHILDREN!

IF SWALLOWED: Immediately call a POISON CONTROL CENTER or doctor/physician.

Rinse mouth.

See Safety Data Sheet for further details regarding safe use of this product. Safety Data Sheets for any Alchemco product may be obtained by contacting:

Alchemco, 3532 Mayland Court, Henrico, VA 23233. 800-610-2895 or emailing technical@alchemco.com or calling:

**CHEMTREC 800-424-9300 (US)
703-741-5970 (International).**

APPLICATION RATE & PACKAGING

Coverage rate: 1 bag / cubic yard of concrete

Packaging: 20 bags / 5-gallon pails

SHELF LIFE & STORAGE

Store in a cool, dry place and keep away from all sources of heat and sunlight. The shelf life is up to 24 months if stored in unopened containers and as per recommendations. Please adhere to the same storage advisories when product is being stored on the project site.

PRECAUTIONS

Wear protective gloves, clothing, face and eye protection. If on skin, wash with plenty of water. Move person to fresh air and keep comfortable for breathing. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs, seek medical assistance. Dispose of contents/container in accordance with national regulations.



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CONCRETE WATERPROOFING & MAINTENANCE PRODUCTS



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800-610-2895 | www.alchemco.com

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