

DuraTite® 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, effectively blocking the passage of water and ensuring permanent water tightness throughout the life of the structure. DuraTite Crystalline Admix can also be used in production of waterproofing mortars and surface applied slurry systems.



PERFORMANCE CHARACTERISTICS

Moisture and lime within the mix combine with the active chemicals in the DuraTite 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.

DuraTite 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 DuraTite 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).
- Lowers waterproofing costs by up to 40%.
- No VOC's



PRODUCT 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

DuraTite 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 DuraTite Crystalline Admix be added to the dry mix to ensure even distribution prior to the addition of water. If DuraTite 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 DuraTite Crystalline Admix has been used, effort must be made to prevent concrete from drying to 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 DuraTite Crystalline Admix unless approved or supplied by Alchemco.



IMPROVED CONCRETE PROPERTIES

| | CONTROL | TECHCRETE 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 ¹² | | 93% reduction |

PACKAGING

DuraTite Crystalline Admix is available in 5-gallon pails with 20 bags of product per pail.

AVAILABLE WARRANTIES

DuraTite Crystalline Admix is available with a material only warranty for 2 years. When used in conjunction with a Alchemco system the product becomes part of the warranty for whatever system it is used in combination with.

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.

PRECAUTIONS

Wear protective gloves, clothing, face and eye protection. If on skin wash with plenty of water. Remove 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.

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).



WARRANTY DISCLAIMER

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