Liquid Crystalline Waterproofing Additive for Concrete

- Creates water impermeable concrete
- Meets NSF/ANSI 61
- Protects reinforcement
- Easy to use
- Liquid, not powder – NO clumping
- Does not require premixing

Tested and Certified to NSF/ANSI 61

DESCRIPTION:
Crystal-X® AdMix is a unique liquid waterproofing additive for concrete, consisting of a water based suspension of inorganic waterproofing agents. It can be added to concrete during the batching process or in a ready-mix truck with full mixing capabilities. Unlike powder additives, there is no risk of clumping.

In addition to its waterproofing characteristics Crystal-X® AdMix also increases the compressive strength and freeze thaw resistance of concrete.

WORKING PRINCIPAL:
- While concrete cures and hardens Crystal-X® AdMix forms millions of fine crystalline fibers inside the capillary pores and micro-cracks.
- Crystalline fibers reduce the pore diameter, thus blocking the flow of water through the capillary voids.
- Treated concrete is permanently watertight.

TYPICAL APPLICATIONS:
Any concrete mix requiring waterproofing (water impermeable) capabilities. (i.e. tunnels and subway systems, foundations, precast structures, parking structures, reservoirs, sewage and water treatment plants, swimming pools, underground vaults, etc.).

FEATURES AND BENEFITS:
- Not a dry powder - easier and safer to mix; homogenous - no fear of clumping
- May increase concrete strength
- Resists extreme hydrostatic pressure,
- Maximum water/cement ratio of concrete should not exceed 0.55
- Negligible interference with water reducers and plasticizers
- Negligible effect on slump
- Negligible influence on air entrainment
- Non toxic
- Permanent
- Less costly than most other methods.

DIRECTIONS:
- Stir Crystal-X® AdMix prior to use, to assure that the mixture is homogeneous.
- Assure that the water/cement (w/c) ratio does not exceed 0.55 before Crystal-X® AdMix is added.
- Concrete should be placed no later than 45 minutes after the addition of Crystal-X® AdMix.
- Use a retarder for mix designs containing Type II/V or Type III Portland Cement. Call our office for acceptable products.

A. BATCHING PLANT:
- Add Crystal-X® AdMix at the specified dosage rate to the batching water, or last to the finished mixture in the batch mixer.

B. ON SITE - READY-MIX TRUCK:
- Deliver specified concrete mix to site
- Add 2% - 3% Crystal-X® AdMix
- Mix for minimum 5 minutes or until product disperses.
- Concrete is now ready to be placed.

STORAGE AND SHELF LIFE:
Settlement may occur below 55°F (13°C). Store in room above 68°F (20°C) for 24 hrs and re-stir. Protect from freezing. If frozen, thaw gradually and stir to homogenous mixture. Shelf life in unopened, original containers is 12 months, when stored at 68°F (20°C).

SETTING TIME AND STRENGTH:
The setting time of concrete is affected by the chemical and physical composition of ingredients, temperature of the concrete and climatic conditions. Crystal-X® AdMix is designed for typical Portland cement-rich concrete. Concrete containing Crystal-X® AdMix may develop

Physical Data	
Aggregate state:	Liquid
Color:	Transparent blue
Bulk Density:	9.58 Lb/gal (1.15 kg/L)
pH:	10 -12
VOC:	0
Working Temperature:	> 40° F (> 5° C)
Potable water: (NSF/ANSI 61)	Certified by WQA (see www.wqa.org)
Permeability: (CRD-C 48-92)	No leakage up to 460 ft (140 m) or 200 psi (14 bar) head pressure.

Packaging		
1 gal (3.8L)	Jug	9.6 lb (1.2 Kg)
5 gal (18.9L)	Pail	48 lb (21.7 Kg)
6 gal (22.7L)	Pail	57.6 lb (26 Kg)
55 gal (200L)	Drum	527 lb (240 Kg)
240 gal (908 L)	Tote	2,300 lb (1,045 Kg)

Proposed Dosage Rates		
Dosage guideline:	At w/c ratio <0.40 = 2%*	At w/c ratio ≥0.40 = 3%*
	Sample Dosage Rate	
	2% *	3%*
Per 1 sack (94lb) of cement: By weight: By volume:	 1.88lb (.85 Kg) 25 fl. Oz. (0.73 L)	 2.82 lb (1.28 Kg) 37 fl.oz. (1.1 L)
Per 5 sack (470lb) of cement: By weight: By volume:	 9.4 lb (4.26 Kg) 124 fl. Oz (3.64 L)	 14.1 lb (6.4 Kg) 1.45 gal (5.47 L)
*% Crystal-X® AdMix by weight of cement Amount is approximate and will vary by specific mix design.		

Note: Batching trial mixes under project conditions to determine setting time and strength of concrete is strongly recommended. (Aggregates conforming to a well graded sieve curve are necessary to assure water tightness.)

The temperature of the concrete mix should be above 40°F (4°C).

CURING:
Curing procedures as per ACI Manual of Concrete Practice. (Latest Edition).

NON-CHLORIDE, NON-CORROSIVE:
Crystal-X® AdMix will not initiate or promote corrosion of reinforcing steel embedded in concrete. Neither sodium chloride, calcium chloride nor any chloride-based ingredients are used in the manufacture of CRYSTAL-X®.

SAFETY:
Refer to SDS. For commercial use only. Product is alkaline. Avoid contact with skin and eyes. Wear rubber gloves and safety goggles during mixing and application. After contact with skin, wash with soap and plenty of water. In case of eye contact, rinse immediately with plenty of water and seek medical advice. In case of handling large quantities, provide good ventilation if indoors.

WARRANTY AND DISCLAIMER:

LIMITED WARRANTY: CONSHIELD TECHNOLOGIES, INC. warrants its products to be manufactured free of defects and to be consistent with its standard high quality. We will replace or, at our election, refund the purchase price of, any product which is proven to be defective, provided that the product was properly applied. Our product recommendations are based on Industry Standards and testing procedures. We assume no warranties either, written, expressed or implied as to any specific methods of application or use of the product. CONSHIELD TECHNOLOGIES, INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. CONSHIELD TECHNOLOGIES, INC. shall not be liable for images of any sort including remote or consequential damages, down time, or delay.

INHERENT RISK:
Purchaser assumes all risk associated with the use or application of the product.

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