

DESCRIPTION

CRYSTALSEAL-LQ is a crystalline capillary waterproofing system that consist of blend of sodium silicates, penetrating aids and deformers formulated for application by spray, roller or brush. When apply **CRYSTALSEAL-LQ** to aged or green concrete, **CRYSTALSEAL-LQ** penetrates deeply into the gel and capillary pores of the concrete & reacts with the free lime within the concrete to make a calcium silicate gel (CSH) that is insoluble.

USES

CRYSTALSEAL-LQ is used for waterproofing and hardening of new and/ or aged concrete against both positive or negative hydrostatic water pressure. **CRYSTALSEAL-LQ** penetrates deeply into the gel and capillary pores of the concrete and "CRYSTALLIZED" as part of the concrete. It is a concrete treatment and not a surfaces coating. It does not change the appearance of the concrete because it becomes part of the concrete and it will not make any discoloration or separation.

CRYSTALSEAL-LQ works equally well on old and/ or new concrete, above or below grade, and is intended to be used on place walls, preformed tilt-ups, bridges, road surfaces, pipes, basement walls, foundations, sidewalks and slabs.

**ADVANTAGES**

- Easily applied by spray, brush or roller to new or aged concrete & protect concrete surfaces from abrasion, freeze-thaw damage and chloride ion intrusion.
- Effective waterproofing system in sealing, hardening, and dust-proofing concrete surfaces with no standing water.
- **CRYSTALSEAL-LQ** treatments are permanent and will raise surface PH level high.
- Non-toxic and conform to US EPA – certified for use with potable water.
- Prevents efflorescence, which will improve the bonding of cementitious toppings, coating and paints.
- Offer excellent resistance to common aids, salts, alkali, petroleum oils, solvents, alcohol including wine and beer, vegetable oils, animal and fish oils, fats and fatty aids and other common substances.

Technical Data :

No. of components	1
Specific Gravity	1.15 ± 0.01
Solubility in Water	100% Disperseable
Appearance and Odor	Clear and colorless-no odor
Permeability-pressure applied on positive side (ASTM D 5084-90)	@ 5 bar (51.02m. head of tight)
Permeability-pressure applied on negative side (ASTM D 5084-90)	@5 bar (40m. head of water) = 0 permeability (water tight)
Hydrostatic Pressure Resistance (USACE CRD C48-73)	@ 3 bar (30m. head of water) = 0 leakage (water tight)
Toxicity (ASTM D 3960 & ASTM D 3792)	Volatile organic content (VOC)>0.01 mg/l
Alkaline liquid (pH)	11.5
Freeze Thaw Cycling Damage (ASTM C 666-84)	Treated concrete : 0.7% loss of the original mass. Untreated concrete : 4.8% loss of the original mass.
Hardness (% increase after application)(ASTM C 805)	Test <6% from 46.36 to 49.25 Test <12.83% from 37.65 to 42.68 Test <32% from 29.25 to 38.70
Efflorescence Reduction Fresh Concrete (ASTM C 67-75)	No change to treated concrete
Efflorescence Reduction mature (ASTM C 65-75)	No change to treated concrete

The information given in this data sheet is to the best of our knowledge true and accurate; but as we have no control over where or how the product is applied, there are no warranties expressed or implied regarding the product's use or performance. Customers are advised to thoroughly test before adapting them to their own use. It is strongly recommended to trial on small area before large scale application.

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PROPERTIES

The values given below are average figures achieved in laboratory test. Actual values obtained on site may show minor variations from those quoted.

INSTRUCTION FOR USE**SURFACE PREPARATION**

All surfaces to be treated with **CRYSTALSEAL-LQ** must be thoroughly inspected. The concrete surface must be cleaned and free from any traces of oil, grease, paint, loose dust, mud and laitance. Horizontal surfaces should not have any curing agents or hardeners applied prior to the application of **CRYSTALSEAL-LQ**.

High pressure water jetting is the preferred method of surface preparation because mechanical cleaning, surfaces saturation and substrate roughening can all be simultaneously achieved at one go.

New concrete

Follow the stripping of formwork, either to water jet or acid etch as mentioned above in order to remove all traces of form oil or surface laitance. Construction joints, cold joints and non-leaking joints greater than 0.25mm. wide must be routed out to a minimum 25mm. wide & by 25mm. in depth to reach sound so as concrete, the profile of the routed joint should form a "U" shape.

Leaking cracks

All cracks should be prepared as above to form a chase of 25mm. wide to approximately 35 to 50mm. deep. Remove all debris from the work area before proceed with through saturation of the area prior the next stage of works. Where necessary use **CEMPLUG 102** to stop flow of water at areas where treatment is to be applied.

APPLICATION

Wet the surface before applying **CRYSTALSEAL-LQ**. Thoroughly mix **CRYSTALSEAL-LQ** before applying by airless sprayer, hand-pump-type garden sprayer, roller, brush or squeegee. Agitate while applying to keep ingredients in suspension and from setting out. If puddles or beading is present, blow off with air, squeegee, and wipe up with cloth. Do not allow any **CRYSTALSEAL-LQ** residue to dry on any surfaces, as it will cure into a hard white crystal powder that requires power grinding to remove. Coverage on broom finished concrete is normally 4m² per liters.

Recoat: 15-20 minutes for 2nd coat.
Top 3 day st if 3rd coat light coat preferred.

LIMITATIONS

Apply at temperatures above 38°F and below 125°F. Do not apply to glass, aluminium, porcelain, enamel and clay brick or other clay based products. Do not apply on painted surfaces. If over sprayed onto painted surfaces, it may soften the paint.

ESTIMATING SUPPLY

CRYSTALSEAL-LQ: 3.78 liters per can

COVERAGE

CRYSTALSEAL-LQ Concentrate: Approx. 4m²/litre/coat

STORAGE

CRYSTALSEAL-LQ has a shelf life of 12 months in unopened Condition and kept in a dry store.

SAFETY PRECAUTIONS

Gloves and goggles should be worn. Any splashes to the skin or eyes should be washed off with clean water. In the event of prolonged irritation, seek medical advice. Powder products should be handled to minimize dust formation; use a light mask if excessive dust unavoidable.

FURTHER INFORMATION

With a wealth of technical and practical experience built up over many years in our pursuit of excellence especially in the protective flooring and concrete technology, make **CEMKRETE** your partner today. Contact our hotline now.

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