

Crystalseal-LQ

CEMKRETE

Water based, non-pigmented, aqueous-silicates, penetrating aids and deformers waterproofing and hardening for old or new concrete

Innovative products for your success

Uses

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

Crystalseal-LQ works equally well on old or new concrete, above or below grade, and is intended for uses on poured in 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.
- Effective waterproofing system in sealing, hardening, and dust-proofing concrete surfaces.
- Can be applied to dampen concrete with no standing water.
- **Crystalseal-LQ** treatments are permanent and will raise surface PH level high.
- Non-toxic and US EPA –certified for use with potable water.
- Protect concrete surfaces from abrasion, freeze-thaw damage and chloride ion intrusion.
- Cost effective way of waterproofing system.
- 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.
- Protect concrete from ultraviolet attack.

Description

Crystalseal-LQ is a crystalline capillary waterproofing system is a product which contains a 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 penetrates deeply into the gel and capillary pores of the concrete reacts with free lime within the concrete to make a calcium silicate gel (CSH) that is insoluble.

Technical support

Cemcrete offers a comprehensive range of high performance, high quality flooring, jointing and repair products for both new and existing floor surfaces. In addition, the company offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Properties

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

Specific Gravity	: 1.3
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 water) = 0 permeability (water 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
Absorption (ASTM C 642)	: 7 days = 4.13
Compressive Strength (ASTM C 42)	: 7 days = 3063 psi (control = 2660 psi) 28 days = 3570 psi
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

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Instruction for use

Surface Preparation

Surface must be able to absorb water, to be able to absorb **Crystalseal-LQ**. Surface may be wet, moist or dry, but not having puddles or running water.

Concrete surfaces must be clean, sound and free of oil, dirt, laitance and any other such contaminants which may interfere with the application process. Cleaning can be achieved by high pressure water jetting or by treating the surface with Acid Etch.

High pressure water jetting is the preferred method of surface preparation because mechanical cleaning, surface saturation and substrate roughening are simultaneously achieved.

New concrete

Following the stripping of formwork, water jet or acid etch as above 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 concrete, the profile of the routed joint should form a "U" shape.

Leaking 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** to allow its penetration. 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 **Crystalseal-LQ** puddles or beading is present, blow off with air, squeegee, and wipe up with cloth. Do not allow any **Crystalseal-LQ** to dry on surfaces, as it will cure into a hard white crystal powder that requires power grinding to remove. Coverage on broom finished concrete is normally 18.5m² per 3.78 liters. Smooth, troweled concrete may only require 3.78 liters per 37m².

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. 4.9m²/litre/coat

Storage

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

Precautions

Health and Safety

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.

Additional Information

Cemkrete manufactures a wide range of those complementary products which includes:

- Waterproofing membranes & waterstops
- Joint sealants & filler boards
- Cementitious & epoxy grouts
- Specialized flooring materials
- Fireproof coating and systems
- Concrete admixture
- Repairing material

For further information on any of the above, please consult your local Cemkrete office - as below.

Important Note: Cemkrete warrants its materials free of manufacturing defects and produced as per standard specifications and sold under the terms and conditions of usages, whilst Cemkrete endeavors to ensure that any advice, recommendation, or information, given through its products literatures are reflects of the R&D in-house lab test and practical sites experience and knowledge based feed backs, however, the products are being used under various conditions and applied beyond its control where or how either directly or indirectly at various locations and places at a different stages that of an intended purposes and uses. Therefore, Cemkrete cannot hold warranty or responsible for resultant consequences, such as damages to the property or assets but the product itself.