

MARKCHEM KRYSTOL CW100

CRYSTALLINE WATERPROOFING COATING FOR CONCRETE



DESCRIPTION

KRYSTOL CW100 is a surface-applied, integral crystalline waterproofing material, which waterproofs and protects concrete in-depth. It consists of Portland cement, specially treated quartz sand and a compound of active chemicals. KRYSTOL CW100 needs only to be mixed with water prior to application. When applied to a concrete surface, the active chemicals react with moisture and the by-products of cement hydration to cause a catalytic reaction which generates an insoluble, crystalline structure. These crystals fill the pores and minor shrinkage cracks in the concrete to prevent any further water ingress (even under pressure). However, KRYSTOL CW100 will still allow the passage of vapor through the structure (i.e. the concrete will be able to “breathe”). Even after the concrete has cured, KRYSTOL CW100 remains dormant in the concrete and will reactivate in the presence of moisture to seal capillary tracts and hairline cracks. In addition to waterproofing the structure, KRYSTOL CW100 protects concrete against seawater, wastewater, aggressive ground water and many other aggressive chemical solutions. KRYSTOL CW100 is approved for use in contact with potable water, and is therefore suitable for use in water storage tanks, reservoirs, water treatment plants, etc.

FEATURES / ADVANTAGES

- Becomes an integral part of the concrete, forming a complete body of strength and durability
- Penetrates deeply and seals concrete’s capillary tracts and shrinkage cracks
- Can be applied from either the positive or negative side
- Waterproofing and chemical-resistance properties remain intact even if the surface is damaged
- Completely effective against high hydrostatic pressure
- Easy to apply, labor-cost effective
- Increases concrete’s compressive strength
- Can be applied to moist or “green” concrete
- Protects embedded steel (reinforcing steel and wire mesh)
- Non-toxic. Approved for potable drinking water applications (NSF 61)
- Zero VOC – KRYSTOL CW10 powdered products contain zero volatile organic compounds and are safe for use both outdoors and in confined indoor spaces

RECOMMENDED

- | | |
|--|------------------------------|
| • Basement retaining walls | • Underground vaults |
| • Parking structures | • Swimming pools |
| • Concrete slabs (floor/roof/balcony, etc.) plants | • Sewage and water treatment |

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- Tunnels and subway systems
- Construction joints
- Water retaining structures

- Channels
- Drinking Water Reservoirs
- Bridges, dams and roads

TYPICAL CHARACTERISTICS

Color	: Grey
Compressive Strength	: >25 MPa
Adhesive bond	: NPD
Elastic modulus	: NPD
Thermal compatibility (Part 1)	: NPD
Corrosion behavior	: No Corrosion Effect
Reaction to fire	: NPD
Dangerous substance	: NPD
Chloride Content	: < 0.05 % by mass

DIRECTIONS FOR USE

SURFACE PREPARATION

All concrete to be treated with KRYSTOL CW100 must be clean and have an “open” capillary surface. Remove laitance, dirt, grease, etc. by means of high pressure water jetting, wet sandblasting or wire brushing. Faulty concrete in the form of cracks, honeycombing, etc. must be chased out. Surfaces must be carefully pre watered prior to the KRYSTOL CW100 application. The concrete surface must be damp but with no wet sheen on the surface

MIXING

KRYSTOL CW100 is mechanically mixed with clean water to a creamy consistency or that resembling thick oil. Mix only as much material as can be used within 20 minutes and stir mixture frequently. If the mixture starts to set do not add more water, simply re-stir to restore workability

MIXING RATIOS

Application Method	Vertical Surfaces	Horizontal Surfaces
Brush Application	5 parts KRYSTOL CW100 to 2 parts of water	3 parts KRYSTOL CW100 to 1 part water
Spray Application	5 parts KRYSTOL CW100 to 2.75-3.25 parts of water	NA

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APPLICATION METHOD

Slurry consistency: Apply KRYSTOL CW100 in one or two coats according to specification by masonry brush or appropriate power spray equipment. When two coats are specified, apply the second coat while the first coat is still “green”.

Dry powder consistency (for horizontal surface only): The specified amount of KRYSTOL CW100 is distributed in powder form through a sieve or a semi-mechanical barrow spreader and troweled into the freshly placed concrete once this has reached initial set.

COVERAGE AREA

Vertical Surfaces	Two coats of KRYSTOL CW100 ($0.7\text{-}0.8\text{ kg/m}^2$) applied by brush or spray. Please contact our Representative for alternative application methods that may be applicable to your project and help to increase production.
Horizontal Flatwork	KRYSTOL CW100 (1.1 kg/m^2) applied in one slurry coat to hardened concrete. Alternatively, KRYSTOL CW100 can be dry sprinkled at (1 kg/m^2) and trowel applied to fresh concrete when it has reached initial set.
Construction joints	KRYSTOL CW100 (1.6 kg/m^2) applied in slurry or dry powder consistency immediately prior to placing the next lift/bay of concrete.
Blinding concrete	KRYSTOL CW100 (1.4 kg/m^2) applied in slurry or dry powder consistency immediately prior to placing the overlying concrete slab.

PACKING

25 Kg Double Sealed Bag Packing

STORAGE AND SHELF LIFE

- Store the material in a cool & dry place (Preferably at 30°C temp.). Store under cover, out of direct sunlight and protect it from extremes of temperatures
- Shelf life is one year from the date of manufacturing when stored in undamaged, unopened, original sealed packaging

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HEALTH AND SAFETY

- If it comes in contact with skin, mouth, eyes etc. wash it with plenty of water & if needed take medical advice. If accidentally gets ingested seek immediate medical attention. It is non-toxic
- Do not reuse the containers for storage of consumable items for further information refers to the material safety data sheet. MSDS available on demand.

DISCLAIMER

The above information and details herein are based on the tests conducted & experience on application and usage. The user is advised to carry out the test and take trials to satisfy on the suitability of the products and meeting his requirement considering the prevailing conditions prior to apply/ using it on larger area. As the conditions under which the products are used or transported are beyond our control. We would not hold ourselves responsible on its consequential nonperformance.

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