KRYSTASEAL COAT

Surface-applied crystalline water-proofing system for concrete and mortar

PRODUCT CONFORMITY
AL SAFAT - GREEN BUILDING
Certificate No. CL20020739

DESCRIPTION

KRYSTASEAL COAT is a distinctive crystalline system for waterproofing that can be applied to surfaces. It effectively addresses the issues of water leakage, seepage, or ingress in concrete structures and other cementitious surfaces. The key components of KRYSTASEAL COAT include carefully selected cement, high-quality silica aggregates, and chemicals that are activated by moisture. When water is present, these active chemicals penetrate the capillaries of the water-laden concrete and react with lime to generate crystals that are insoluble. As these crystals grow, they seal the pores and fine cracks in the concrete, effectively preventing any further water passage. The active chemicals continue to remain within the structure, acting as a catalyst to initiate the crystallization process whenever water enters through newly formed capillaries. This ensures a permanent and reliable waterproofing solution.

APPLICATION AREAS

Water Retaining Structures like
- Water tanks/ towers
- Reservoirs and canals
- Swimming pools and concrete pipes
- Water treatment areas
- Harbors and dams

Water resisting structures like
- Basements
- Retaining walls, bridge decks and foundations
- Tunnels and underground car parks
- Inspection pits
- Sea defense walls

ADVANTAGES

- Offers complete and long-lasting waterproofing solutions.
- The active ingredients of the system have a prolonged presence.
- Capable of withstanding both positive and negative pressure.
- Non-toxic and safe for use in potable water tanks.
- Protects concrete and reinforcement from corrosion caused by waterborne substances such as chlorides and sulfates.
- Enhances the resistance of concrete structures against weathering and chemical attacks.

APPLICATION

Surface Preparation:
Surface to be treated must be free from dust, oil, grease, residual curing compound, release oil, paints etc. Surface should have an open capillary system. As the active chemical ingredients require moisture, the surface should be pre-wetted well. High pressure water jetting is the preferred method of surface preparation because mechanical cleaning, surface saturation and substrate roughening are simultaneously achieved. Static cracks should be filed with KRYSTASEAL COAT modified m ortar and cured. Prior to the application of KRYSTASEAL COAT, ensure that the concrete surface is damp, but free of standing water

Mixing:
Slurry coat - Always add water to KRYSTASEAL COAT and not vise versa. Add 1 part of water to 2 to 2.5 parts of powder by volume, to get a thick creamy consistency

Render or Mortar - KRYSTASEAL COAT modified mortar is made by mixing KRYSTASEAL COAT, cement and sand at a ratio of 1: 1: 4. First dry mix, and then add water to get a mortar consistency. KRYSTASEAL COAT modified mortar should be used within 20 minutes after mixing

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Applications:
KRYSTASEAL COAT is normally applied by brushes or by appropriate power spray equipment. Apply the material in two coats at right angles. The second coat must be applied whilst the first coat is firm but fresh (usually 3 to 4 hours after the first coat). The slurry should be used within 20 minutes after mixing. If the mixture starts to set, do not add more water, but stir well to improve the workability. For further protection, apply plaster or cement/sand mortar, when KRYSTASEAL COAT is still fresh and tacky.
- Clean all the tools with water.

Curing:
The KRYSTASEAL COAT must be prevented from drying out too rapidly and should be kept damp for 5 to 7 days. Mist spraying with water and covering with polythene sheet is effective. Curing compounds are unsuitable for use with KRYSTASEAL COAT system. Protect from weathering, sun, frost and wind for a similar minimum period. Tanks and other water retaining structures may be filled after 72 hours on application as crystal growth is accelerated by water pressure.
Note - KRYSTASEAL COAT shall not be applied at temperatures below 5 ˚C

PACKAGING & STORAGE

KRYSTASEAL COAT is available in 15 Kgs bag.
KRYSTASEAL COAT should be stored in cool, dry and shaded warehouses.
Shelf life is 12 months when stored under cover, out of direct sunlight, protected from extreme temperatures and as per recommendations. In extreme tropical climate, the product must be stored in cooled ambience. Excessive humidity and over exposure to UV will result in the reduction of shelf life.

CONSUMPTION

Structural Element	Type of Application	Consumption
Concrete Slab	dry sprinkle, brush or spray in 1 coat	1.2 kg/m²
Concrete Walls	brush or spray in 2 coats	1.5 kg/m²
Construction Joint	brush in 1 coat	1.5 kg/m²

SAFETY

KRYSTASEAL COAT is formulated without any hazardous substances. However, as with all construction chemical products, it is important to exercise caution. When handling KRYSTASEAL COAT, it is recommended to wear protective clothing such as gloves and goggles. For maximum safety, wearing a long sleeve overall, safety shoes, and a face mask is also advised. After each use, reseal the containers and store the product according to the safety instructions on the label. In case of contact with the skin or eyes, immediately rinse with fresh water. If any of the product is accidentally swallowed, do not induce vomiting, but seek immediate medical assistance. For more detailed information, please consult the Material Safety Data Sheet (MSDS) provided.

TECHNICAL SPECIFICATIONS

Appearance	Powder
Color	Cement Grey
Density	1.3gm/cc
Bulk Density	1.5Kg/m3 approx
Setting time	2 hours approx
Penetration Rate	2mm / 7days
Particle Size	40-150 microns
Compressive Strength	57.5 N/mm2 (BS 1881)
Flexural Strength	10.3 N/mm2 (BS 6319)
Application Temp	50C to 55C

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