

K2 CRYSTAPROOF WP

Crystalline Waterproofing

Description:

- K2 Crystaproof WP is a surface-applied crystalline waterproofing material for concrete.
- It consists of Portland cement, specially treated quartz sand, and active chemical compounds.
- The material is mixed with water before application.
- On application, the active chemicals react with moisture and cement hydration by-products to form insoluble crystalline structures.
- These crystals fill pores and minor shrinkage cracks, restricting water ingress, including under hydrostatic pressure.
- The treated concrete remains vapor permeable.
- K2 Crystaproof WP remains active within the concrete and reactivates in the presence of moisture to seal capillaries and hairline cracks.
- It provides resistance to seawater, wastewater, aggressive groundwater, and various chemical solutions.
- Approved for contact with potable water and suitable for water-retaining and water-treatment structures.

Area of Application:

K2 Crystaproof WP application areas include:

- Basement retaining walls
- Parking structures
- Concrete slabs (floor/roof/balcony, etc.)
- Tunnels and subway systems
- Construction joints
- Foundations
- Water retaining structures
- Underground vaults

- Swimming pools
- Sewage and water treatment plants
- Channels
- Reservoirs
- Bridges, dams and roads

Benefits:

- Forms an integral part of the concrete matrix.
- Applicable to structurally sound concrete, new or existing.
- Penetrates and seals concrete capillaries and shrinkage cracks.
- Can be applied on the positive or negative pressure side.
- Retains waterproofing and chemical resistance even after surface damage.
- Performs under high hydrostatic water pressure.
- Provides an alternative to membrane and clay panel waterproofing systems with lower lifecycle cost.
- Simple application with reduced labor requirement.
- Contributes to increased compressive strength of concrete.
- No risk of joint failure, tearing, or puncture.
- Does not require protection during backfilling, reinforcement placement, or other construction operations.
- Protects embedded steel (reinforcing steel and wire mesh).
- Can be used as corrosion protection of reinforcement steel bars.
- Non-toxic.

Technical Data:-

Properties	Results
Appearance	Grey color free flow powder
Bulk density	0.95 - 1.11 g/cc
pH (10% Solution)	11
W/P ratio	0.30
Mix Density	2.00 - 2.15 g/cc
Mixed consistency	Brushable thick slurry.
Pot Life	30 minutes

Application Instruction:

SURFACE PREPARATION

- Ensure all concrete surfaces to receive Crystaproof WP are clean and have an open capillary profile.
- Remove laitance, dust, oil, grease, and other contaminants using high-pressure water jetting, wet sand blasting, or wire brushing.
- Chase out defective areas such as cracks, honeycombing, and voids.
- Pre-wet the surface thoroughly before application.
- Maintain the concrete in saturated surface-dry (SSD) condition — damp with no visible water sheen prior to applying Crystaproof WP.

MIXING PROCESS

- Mechanically mix Crystaproof WP with clean water until a smooth, creamy consistency similar to thick oil is achieved.
- Prepare only the quantity that can be applied within 20 minutes.
- Agitate the mix regularly to maintain uniform consistency.
- If the material begins to stiffen, do not dilute with additional water; re-mix thoroughly to regain workable consistency.

APPLICATION PROCESS

Slurry Consistency:

- Apply Crystaproof WP in two coats as per project specification using a masonry brush or suitable spray equipment.

- Where two coats are required, place the second coat while the first coat remains in a “green” (partially cured) condition.

Dry Powder Consistency (Horizontal Surfaces Only):

- Spread the specified quantity of Crystaproof WP in dry powder form using a sieve or semi-mechanical spreader.
- Trowel the material into freshly laid concrete after it has reached its initial set.

POST-TREATMENT:

- Maintain the treated surfaces in a moist condition for a minimum period of five days.
- Protect the application from direct sunlight, strong winds, and frost.
- Cover the surface with polyethylene sheets, wet hessian/burlap, or other suitable protective materials during the curing period.

Coverage:

- **Crystalline slurry coating:** 1.2 kg/m² per coat (minimum 2 coats)
- **Crystalline dry shake:** 1.8 kg/m² per coat
- **Crystalline integral waterproofing admixture:** 0.8–1.0% of cement weight

Packing:

K2 Crystaproof WP is available in 25 kg Pack.

Shelf Life and Storage:

K2 Crystaproof WP has a shelf life of 12 months from the date of manufacturing. Store the material in cool and dry place.

Health & safety:

Use normal safety precautions. Wear rubber hand gloves, safety shoes and safety goggles while using and handling the product. Avoid contact with skin and eyes. In case of accidental contact with eyes, wash with plenty

of water and seek medical treatment.

Technical Support:

The company provides a technical service supported by the team of specialist applicators in the industry.

Important Note:

KONKEM Industries Private Ltd products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst KONKEM Industries Private Ltd endeavors to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it or its applicators.

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#01/0426