

TECHNICAL DATA SHEET

Surface-Applied Cementitious waterproofing

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Krytol T1[®] Waterproofing System

DESCRIPTION

Krytol T1[®] is a surface-applied crystalline waterproofing treatment for concrete structures that is used to protect against the ingress of water. It is a dry powder, which when mixed with water becomes a coating that is applied to the inner or outer side of a concrete structure. Krytol T1[®] may also be applied as a dry-shake to freshly poured concrete.

Krytol T1[®] contain Kryton's unique and proven Krytol[®] technology which reacts with un-hydrated cement particles to grow millions of needle-like crystals deep into the concrete mass. Over a period of weeks and months, these crystals grow, filling the naturally occurring pores and voids in concrete, and permanently blocking the pathways for water and waterborne contaminants. Later, if cracks form due to settling or shrinkage, incoming water triggers the crystallization process and additional crystals begin to grow, filling cracks and ensuring that the structure's waterproofing barrier is maintained and protected. The concrete itself becomes the waterproof layer removing the need for any surface treatment.

FEATURES

- Replaces unreliable exterior membranes, liners and coatings
- Reaches well below the surface and is not affected by surface wear or abrasion
- Self-seals hairline cracks up to 0.5 mm (0.02 inches)
- Reactivates in the presence of moisture
- Waterproofs from any side (i.e. positive or negative side)
- Treatment may be applied to old or new concrete
- Safe for contact with potable water



KEY BENEFITS

- Lowers the cost of waterproofing
- Permanently waterproofs the concrete
- Increases reliability and quality control
- Increased durability decreases building maintenance and repair costs
- Protects against corrosion
- Superior performance



Kryton Buildmat Co. Pvt. Ltd.

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RECOMMENDED USES

- For concrete foundations, walls and slabs on grade
- Construction Joints
- Elevator pits and equipment pits
- Parking structures
- Swimming pools and water features
- Water towers, reservoirs and storage tanks
- Tunnels, pipes and underground vaults
- Water treatment reservoirs
- Bridge decks, elevated slabs and ramps
- Rooftops and roof decks

PHYSICAL PROPERTIES

Appearance	Gray powder
Bulk density g/cm ³ (lb. /cu. ft.)	1.36 (85)
pH (when mixed with water)	13

PLASTIC PROPERTIES

Working Time (20°C/ 68°F, 50% RH)	60 minutes with continued stirring (slurry) 30 minutes (dry-pack)
Hardening Time (20°C/ 68°F, 50% RH)	5 hours (slurry) 3 hours (dry-pack)

HARDENED PROPERTIES

Hydrostatic head resistance	140 m (460 ft.)
Typical Rate of Crystal penetration	2mm (0.08 inches) per week

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APPLICATION

- **Surface Preparation**

Surface must be clean and have an 'open capillary surface'. Remove laitance, dirt, grease etc. by means of high pressure water jetting, wet sandblasting or use of hard bristle brush. Concrete slab with crack, construction joints, honey combing etc. must be treated with Kryton products before pre-watering the surface. Krystol T1[®] slurry to be applied on damp surface with no wet sheen

- **Dry-shake broadcast**

Spread Krystol T1[®] on freshly-poured horizontal slabs before final trowelling and finishing at a coverage of 1.0 kg/m².

- **Horizontal Surfaces**

Single Coat - Mix Krystol T1[®] to a slurry consistency (5 parts powder to 2 part clean water). Apply with a natural bristle concrete brush using an aggressive circular motion to coat the concrete with the Krystol T1[®] mix at a rate of 1.0 Kg/m².

Double coat (Krystol T2[®]) Mix Krystol T1[®] to a slurry consistency (5 parts powder to 2 part clean water). Apply with a natural bristle concrete brush using an aggressive circular motion to coat the concrete with the Krystol T1[®] mix at a coverage of 0.8 kg/m². After 4-6 hours of Krystol T1[®] application, mix Krystol T2[®] to slurry consistency (5 parts powder to 2 parts of clean water) and apply Krystol T2[®] slurry over Krystol T1[®] at the rate of 0.8 kg/m² with a natural bristle concrete brush.

- **Vertical Surfaces (+ve side)**

Single Coat - Mix Krystol T1[®] to a slurry consistency (5 parts powder to 2 part clean water). Apply with a natural bristle concrete brush using an aggressive circular motion to coat the concrete with the Krystol T1[®] mix at a rate of 1.0 kg/m².

- **Vertical Surfaces (-ve side) - (Krystol T2[®])** Mix Krystol T1[®] to a slurry consistency (5 parts powder to 2 part clean water). Apply with a natural bristle concrete brush using an aggressive circular motion to coat the concrete with the Krystol T1[®] mix at a coverage of 0.8 kg/m².

Constructions Joints (+ve sides) Mix Krystol T1[®] to putty consistency (5 parts powder to 1 part clean water) and apply at the rate of 0.406 kg/mtr approx. for 10 mm & subsequent layer of 10 mm with Krystol Bari-Cote™ at the 414 gm/mtr in a groove of 20 mmX25 mm

- **Tie Rod Treatment**

Mix Krystol T1[®] to putty consistency (5 parts powder to 1 part clean water) and apply at the rate 0.05 kg/point. and subsequent layer with Krystol Bari-Cote™ at the 0.05 kg/point approximately in a groove of 10 mm

Please contact a Kryton representative for details.

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- **Post Treatment Care**

Completed application should be protected against direct exposure to sun for 48 hours and against rain and light traffic for 12 hours. Heavy traffic should be avoided until the surface has hardened (at least 5 days). The treated concrete surface should not be permanently exposed to liquids for 7 days. Finishes containing Portland cement may be applied over Krystol T1[®] after 3 hours and other can be applied after 7 days. For using Krystol T1[®] as part of a crack repair system, please refer to Kryton's Krystol Crack Repair System. For using Krystol T1[®] as part of a construction joint system, please refer to Kryton's Construction Joint System.

Note: Application should not be made when the surface temperature is below 5°C (41°F).

LIMITATIONS

Krystol T1[®] is an effective waterproofing system for rigid concrete structures only and may not reliably seal cracks and joints that experience constant or repeated movement. However is effective on surface with minor movement as experienced on Balconies, terraces which takes normal load. Consult a Kryton representative for project specific recommendations. Krystol T1[®] is not a decorative coating.

SAFETY

For professional use only. This product becomes extremely caustic when mixed with water or perspiration. Avoid contact with skin or eyes. Avoid breathing dust. Wear long sleeves, safety goggles and impervious gloves.

PACKAGING

- 25 kg resalable pail

SHELF LIFE

Krystol T1[®] has a shelf life of 2 years unopened pails when stored under standard conditions and minimum temperature of 7°C.

WARRANTY

Kryton Buildmat Co. Pvt. Ltd. (A unit of Kryton, Canada) warrants that its products are free from manufacturer's defects and, when applied in accordance with the current specifications and application instructions will perform as stated in its product literature. Because methods and conditions of use are beyond the control of Kryton, no guarantee, expressed or implied can be given as to the results of application. Liability of Kryton shall be limited to replacement of materials proved defective or, at its option, refund of the purchase price of the product.

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