

TECHNICAL DATA SHEET

Surface Applied Waterproofing



Krystol T1[®] Waterproofing System

DESCRIPTION

Krystol T1[®] is 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.

Krystol T1[®] contains Kryton's unique and proven Krystol[®] technology which reacts with moisture and un-hydrated cement particles to grow millions of needle-like crystals deep into the concrete mass. Over a period of weeks, 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 & BENEFITS

- 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 in.)
- Reactivates in the presence of moisture
- Waterproofs from any side i.e. positive or negative side (along with Krystol T2[®])
- Treatment may be applied to old or new concrete
- Safe for contact with potable water
- Permanently waterproofs the concrete
- Increases reliability and quality control
- Lowers the cost of waterproofing
- Increased durability reduces building maintenance and repair costs
- Impervious to physical damage and deterioration
- Protects against corrosion
- Superior performance

RECOMMENDED USES

- Concrete foundations, walls, and slabs on grade
- Marine structures
- 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

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PROPERTIES

<u>Physical Properties</u>	
Appearance	Gray powder
Bulk density g/cm ³ (lb. /cu. ft.)	1.36
pH (when mixed with water)	12
<u>Plastic Properties</u>	
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)

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.

- **Horizontal Surfaces**

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

Double Coat (Krystol T2®, for –ve side) Mix Krystol T1® to a slurry consistency (1 part powder to 2 parts 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 Surface (+ve side) -**

Single Coat – Mix Krystol T1® to a slurry consistency (5 parts powder to 2 parts 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) along with Krystol T2®**

Mix Krystol T1® to a slurry consistency (5 parts powder to 2 parts 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 and apply Krystol T2® slurry as a second coat over Krystol T1® at the rate 0.8 kg/m² with a natural bristle concrete brush.

- **Construction Joints** - 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 12.5 mm & subsequence layer of 12.5 mm with Krystol Bari-Cote™ at the rate of 414 gm/mtr (4 parts powder to 1 part clean water) in a groove of minimum 20mm x 25mm.

Note: Consumption may vary depending upon the size of the groove at site.

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Please contact a krypton representative for details.

- **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 3.5 hours and other can be applied after 7 days. 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.

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

PACKAGING

Krystol T1 is available in 25 kg resealable pails.

SHELF LIFE

When stored in a dry enclosed area, Krystol T1 has a shelf life of 3 years for unopened pails.

WARRANTY

Kryton Buildmat Co. Pvt. Ltd. warrants that its products are free from manufacturer's defects and, when applied in accordance with the current specification application instructions will perform as so 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 Buildmat Co. Pvt. Ltd. shall be limited to replacement of materials proved defective or, at its option, refund of the purchase price of the product.