

## Crystalline Waterproofing by Dry-Shake Method

### DESCRIPTION

**TIKICRYST BC** is ready to use crystalline Dry-Shake powder for the waterproofing and protection of concrete.

**TIKICRYST BC** is new generation hydrophilic crystalline waterproofing and permeability reducing dry-shake powder, effective in enhancing concrete impermeability and durability by effectively sealing concrete surface pores and capillaries and reducing the shrinkage cracks.

It is applied as a dry shake system on to freshly laid concrete surfaces and trowelled into the concrete during the final finishing. It is best suitable for thick concrete slabs that are power trowelled during finishing.

It becomes integral part of the concrete surface thereby eliminating problems normally associated with other waterproofing, such as de-lamination, mechanical damage, wear and tear etc.

### ADVANTAGES

- Resistance to extreme hydrostatic pressure from both positive and negative side.
- Permanently active waterproofing.
- Becomes integral to the concrete surface - high resistant to physical damage and deterioration.
- Does not undergo wear and tear like other waterproofing systems – zero repair and maintenance cost - highly durable.
- Allows concrete to breathe.
- Densifies concrete surface -increases durability.
- Eliminates need for other waterproofing system.
- Reduced cost when compared to other waterproofing systems.

- Non-toxic and non-staining – suitable for use in potable water storage and transportation systems.
- Decreases concrete permeability - imparts protection to reinforcement steel in concrete against corrosive chemical attack.

### USES

- Below grade structures, concrete foundations, basement / retaining walls and slabs on grade.
- Swimming Pools and water bodies.
- Tunnels, dams, canals and harbours.
- Parking decks and traffic bearing structures.
- Rooftop slab.
- Sewage and water treatment plants.
- Elevator pits, elevated slabs & ramps.
- Water towers and water reservoirs.
- Marine structures, bridge decks etc.
- Concrete walls, floors and pipes.

### PROPERTIES

Colour	Grey
Appearance	Free flowing granular powder
Bulk Density	≈1160 Kg./m <sup>3</sup>
Solids	100%
Water Resistance	140m of water head pressure

### APPLICATION INSTRUCTION

#### SURFACE PREPARATION

The surface should be structurally sound and free from dirt, soil, oil release agent, laitance, residual curing compound, silicon or silane water repellants, polymer modified mortars or renders, left over paint traces, and any other foreign materials, which may impair the bond, penetration and/ or overall performance of **TIKICRYST BC**.

#### PRIOR TO APPLICATION

- 1) Extremely smooth concrete surface must be water blasted or sand blasted or acid etched to make sure the concrete surface has open capillary system. The surface to be treated should never have shiny appearance and should have open pores to enable the penetration of active chemicals in to the concrete.
- 2) Visible static cracks exceeding 0.25mm in size should be opened out to a depth of 20 mm to 25 mm in 'V' shape and repaired with repair mortar **TIKI CRM**.
- 3) All honeycombed pocket, bug holes, construction joints should be opened out to sound concrete and repaired with repair mortar **TIKI CRM**.
- 4) Dry surfaces should be made damp by sprinkling water prior to broadcasting of **TIKICRYST BC** system. Moisture must be present in the concrete strata to ensure maximum chemical penetration. Surfaces should be damp when dry-shake powder is broadcasted.
- 5) If running water is present, then use instant setting plugging mortar or hydrophobic PU foam injection grout **DANOINJECT PUF**.

**TIKICRYST BC** is a dry powder that is applied by broadcasting over the concrete surface just before finishing begins at a coverage rate of 1.6 Kg./ m<sup>2</sup>.

Broadcast evenly first one-half of **TIKICRYST BC** dry-shake powder by hand or mechanical spreader. As soon as it absorbs moisture from the concrete surface, trowel /power float to finish the surface immediately followed by the broadcasting of remaining half of **TIKICRYST BC** dry-shake powder at right angles to the first application. Allow the second application to absorb moisture from concrete surface and trowel / power float to finish the surface

Over troweling or power floating should be avoided, otherwise it may lead to blistering and /or delamination of the treatment.

#### APPLICATION RATE

It is recommended to broadcast **TIKICRYST BC** dry-shake powder @ 1.6 Kg./m<sup>2</sup> in two applications.

#### LIMITATIONS

**TIKICRYST BC** is suitable for use in concrete structures having crack width ≤0.5mm. If the constant or repetitive movements are expected in the racks / joints, than in such cases, **TIKICRYST BC** may not perform effectively.

**TIKICRYST BC** should not be used on concrete surfaces having cement content less than 250 Kg./m<sup>3</sup>. Also, it should not be used when w/c ratio of concrete mix is >0.50.

When high performance concrete is used or when concrete has very low w/c ratio or high air entrainment, it is recommended to test the product for evaluating the finish.

#### CURING

Curing should commence as soon as final set has occurred but before the treated surface begins to dry and should continue for at least 48 hours.

Wet curing of applied system as per basic curing procedure would be beneficial.

Rapid drying of applied system should be prevented by sprinkling / spraying water and covering it with polyethylene sheet for at least 7 days.

Storage bodies should be filled with water minimum 24 hours after the final coat is applied.

## CLEANING

Immediately after application, use water for cleaning application tools.

## SUPPLY

**TIKICRYST BC** is supplied in 25 Kg. pack size.

## STORAGE

**TIKICRYST BC** must be stored above 5°C. Store under the shed & protect from extremes of temperature, heat, direct sunlight. The shelf life is 6 months in sealed unopened packing.

## SAFETY PRECAUTIONS

As with all chemical products, care should be taken during use and storage. Avoid contact with skin, eyes, mouth and food. For further detail, refer to Material Safety Data Sheet.

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