

### MONNELI KRETESIL CR

*Crystalline Waterproofing Mortar*

#### Product Description

Provides total and permanent waterproofing solution to water leakage, ingress or seepage in concrete structures or any cementitious substrates due its unique, surface applied penetrative capillary water proofing system.

KRETESIL CR Works through internal crystallization that seals the pores and hairline cracks in the concretes thus blocking effectively further passage of water. The active chemical in KRETESIL CR serves as a catalyst to re-activate crystallization process every time water penetrates into the structure through newly formed capillaries therefore ensuring permanent water tightness.

#### Uses

KRETESIL CR is generally applied to concrete and other cement structures where water needs to be kept in or kept out such as:

- Industrial processing plants
- Parking decks
- Road decks
- Cellars and concrete roofs, etc.

KRETESIL CR can also be used as effective waterproofing system for the following:

- Swimming pools
- Reservoirs and water tanks
- Water treatment areas
- Canals, harbors and dams
- Concrete pipes
- Tunnels
- Sea defense walls
- Bridge decks
- Retaining walls
- Jetties

#### Advantages

- Non-toxic and does not contain any momentary organic components
- Excellent resistance to freeze thaw cycles
- Can be applied even on humid surface
- Guarantees permanent water sealing of concrete
- Can be applied on all structurally sound concrete – whether old or new
- Active components present in the watertight concrete reactivates upon impact with water
- Treated concrete are completely watertight after 5 days
- Shields concrete and reinforcement from corrosion due to water born substances like Chlorides and Sulphates

#### Instruction for Use

##### Surface Preparation

The surface of the concrete shall be sound, clean and uncontaminated.

This preparation shall be such as to leave a sound exposed concrete surface free from dust, loose particles and any deleterious matter. If the concrete surface is defective or has laitance, it must be cut back to a sound base.

Moss and lichen must be removed physically followed by treatment with fungicidal wash. After treatment, it must be washed down thoroughly with clean water. In addition, make sure that all surfaces must be damp but not totally wet before progressing the work.

##### Crack Treatment

Shrinkages and non-moving structural cracks less than 0.3mm shall be filled with a pre-treatment strip of KRETESIL CR directly bridging over the crack..

Static cracks that are greater than 0.3mm shall be repaired by chiseling the crack into a V-shape, to a

depth and width of 25mm and priming it with PRIMER A18 followed by the application of Colmef cementitious repair material.

Voids and honeycombs shall be patched with BETOFINISH C, a single component polymer modified fairing coat, allowing the area to cure before applying the membrane.

### **Right angle bends**

All right angle bends must have a coving detail installed. In areas where parapet walls, columns, pipe penetrations are present, a 45° coving fillet shall be made at all corners using BETOCEM FIBER, a Fiber reinforced shrinkage controlled mortar for concrete repair to the water saturated cured surface.

All other angles, joints, protrusions and stress joints should be pre-treated with a heavy application of KRETESIL CR extending 150mm on both sides of the coving.

### **Movement Joints**

Expansion and movement joints should be sealed with ELASTOSEAL PU25, a Polyurethane sealant. Allow to cure before the application of KRETESIL CR.

### **Mixing**

In the event that the use of masonry brush is the method for application, mix 7 - 7.5 liters of water with 25 kg of KRETESIL CR, while when a power spray gun is being used, prepare a mixture of 8 – 8.5 liters of water with 25 kg of the product.

Mix only as much product as necessary and ensure to stir the mixture regularly. In the event that the mixture starts to set, it is not advisable to add more water, instead simply re-stir the prepared mixture

### **Application**

KRETESIL CR shall be applied by brush or trowel in 2 coats at a rate of 1.9kg/m<sup>2</sup> per 1mm to achieve a minimum dry film thickness of 1mm for each coat. The two coats must be applied at right angles to one another attaining a total thickness of 2mm.

### **Curing & Protection**

Surfaces treated with KRETESIL CR must be kept damp and must be protected from the drying action of direct sunlight for a minimum period of 3 days after application.

Protect all treated surfaces from wind and frost, by covering with plastic sheeting, damp hessian or equivalent.

### **Cleaning**

Clean the tools immediately after use with clean water. During work, it is recommended to place the tools in water while not in use. Cured materials should be mechanically removed.

### **Recommendations**

- Do not apply KRETESIL CR on temperatures below +5°C.
- KRETESIL CR could not be used as an additive to concrete or plasters.
- KRETESIL CR is not suitable for use as curing compounds.

### **Technical Data**

Properties	Results
Appearance	Cementitious grey powder
Wet density at 25°C	1.9 kg/L
Compressive strength at 28 days (ASTM C579)	48 N/mm <sup>2</sup>
Bond strength at 28 days (ASTM D4541)	>1.0 N/mm <sup>2</sup>
Chloride content (ASTM D1556 – 04)	Low
Water vapor transmission (ASTM E96)	1.09 g/h.m <sup>2</sup>
Depth of water penetration (BS EN) 12390 - 8	Nil
Workable time at 25°C	Up to 30 minutes
Setting time at 25°C	5-8 hours

All values are subject to 5-10 % tolerance

## Consumption

Apply KRETESIL CR into two coats:

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- A consumption of 1.9kg/m<sup>2</sup> KRETESIL CR powder corresponds to a cured KRETESIL CR with a minimum thickness coating of 1mm
- A consumption of 1.9 kg/m<sup>2</sup> KRETESIL CR slurry corresponds to a wet KRETESIL CR coating of 0.8mm.
- Ensure that the period between the application of first and second layer is between 3 – 4 hours at a temperature of +25°C.

## Packaging

KRETESIL CR is supplied in 25 kg bag.

## Storage

Keep the product in dry and covered shed. Exposure to extreme temperature and humidity results in the deterioration of the product's efficiency. Shelf life is 12 months if stored tightly sealed containers under good storage conditions.

## Health & Safety

KRETESIL CR is a cement-based product. Avoid contact with skin or eyes. It is recommended to use gloves and goggles during application.

In case of contact with eyes, wash abundantly with warm water and consult a doctor immediately. Provide adequate ventilation and avoid inhalation of dust.

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