

MONNELI KRETESIL

Cementitious Waterproofing Osmotic Mortar

Product Description

A ready-mix, cementitious, and surface applied, waterproofing membrane consisting of Sulphate resistant cement, graded quartz and inorganic additives. KRETESIL has been tested to a pressure of 1.5 bar. The initial and final bonding capability of KRETESIL is excellent, making it suitable for application to both vertical and horizontal surfaces on concrete, block work, cement plaster etc. It is durable, resistant to frost and heat after setting and remains permeable to water vapor. Certified for DCD & DCL.

Advantages

- Used for internal and external applications
- Used to waterproof against positive and negative pressure
- Approved for potable water contact
- Based on Sulphate resisting cement making it suitable for use in sewerage processing tanks
- Excellent bonding to masonry, brick, stone and concrete surface, where crystal growth treatments are not effective

Design Criteria

In the most waterproofing applications, KRETESIL is applied in two coats by brush, trowel or spray.

Specific minimum application rates are as follows: For ground moisture or pressure-less surface water, application by brush, trowel or spray at an application rate 0.9kg/m² in two coats. (Total minimum layer thickness must be 1.0mm).

Uses

KRETESIL is excellent for solving the problem of water seepage and condensation through concrete and masonry in both new and old structures. It is ideal in applications where high pressure face is not easily accessible and for waterproofing the inside face of vertical and horizontal surfaces such as:

- Swimming pools
- Sewerage processing tanks
- Concrete block walls and any masonry surface
- Bathrooms
- Kitchens
- Basement walls
- Lift pits
- Water storage
- Drainage tanks
- Sewer aqueducts

Water under pressure – up to four coats by brush, trowel or spray at an application rate of 1.3kg/m² per coat. (Total minimum layer thickness must be 3.0 mm).

Instructions 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 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 extending 150mm on both sides of the coving.

Movement Joints

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

Priming

Highly porous concrete or concrete containing micro-silica will require priming with Primer A18, from Colmef, a synthetic, high penetrating primer.

The primer shall be applied at a rate of 5-6 m²/Liters and left to achieve a tack-free condition before applying the top coat.

Mixing

Place 25 kg of KRETESIL into a container containing 5.25 – 5.75 liters of clean water for brush or trowel application or use 6 liters of water for spray application. The KRETESIL powder and water must be thoroughly mixed using a slow speed electric drill (300 rpm) mixer fitted with a suitable mixing paddle.

Mix until a uniform lump free consistency is achieved. Keep the obtained mix for 5 minutes and then remix before application. Mix only as much material as can be used within 20 minutes and stir the mixture frequently. If the mixture starts to set, do NOT add more water; simply stir the product to restore workability.

Application

Apply the first coat from the base of the wall and work towards the top using a trowel, a hopper gun or a brush in a horizontal action. After 4 - 5 hours apply the second coat 'green on green' so that a chemical bond is achieved between the two coats. Do not apply first coat more than can be over coated with a second coat during the same day.

If KRETESIL is applied by spray using a Hopper Gun, ensure that the gun is held directly perpendicular to the surface at a distance of about 500 mm to ensure that the maximum impact energy is applied to the surface and to prevent any shadowing across small surface imperfections.

After application of the first coat by (spray, brush or trowel) wet surface to remove any entrapped air.

Curing and Protection

Surfaces treated with KRETESIL 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.

Recommendations

KRETESIL is a cement product, so all the precautions for concrete practice must be followed.

- During windy or sunny days, spray water onto the surface to avoid the rapid evaporation of water.
- Do not apply at a temperature below to +5°C.
- Allow concrete supports to cure for 28 days
- Cannot be used on substrate with possible moving cracks.

- The maximum applicable thickness is 1 mm per coat, with either trowel or brush.

Technical Data

Properties	Result
Appearance	Cementitious grey, white Powder
Mix Density at 25°C	1.75 kg/L
VOC	2.0 g/L
Water permeability	NIL
Compressive strength (ASTM C579)	25 N/mm ²
Bond strength (ASTM D4541)	>1.5 N/mm ²
Chloride Ion diffusion (ASTM D1556-04)	Low
Water vapor transmission (24 hours) (ASTM E96 – 95)	1.09 g/h.m ²
Reaction to fire test (ASTM E84)	Class A
Workability	Above 30 minutes
Service temperature	-5°C to +80°C

All values are subject to 5-10 % tolerance

Consumption

1.75 kg/m² at 1mm thickness.

Packaging

KRETESIL is supplied in bags of 25kg

Storage

Store in cool, dry conditions away from direct sun light. Shelf life is 12 months from the manufacturing date.

Health & Safety

KRETESIL is cement-based product. During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment if necessary.

In case of contact with skin, rinse with water and again wash thoroughly with soap and water. In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly.

If ingested, obtain medical attention immediately. Do not induce vomiting.

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