

MONNELI CEMCOAT

Single Component Flexible Waterproofing Slurry

Product Description

A flexible, hydraulically setting, sulphate resistant waterproofing slurry that can be applied as a crack-bridging waterproofing coating for indoor and outdoor areas of buildings. CEMCOAT as a single component dry mix mortar can be mixed on site with water to form a ready-to-use waterproofing slurry.

Uses

CEMCOAT is used for internal and external waterproofing of concrete and masonry supports against humidity, running water, stagnant water etc.

It can be applied to waterproof structures such as:

- Swimming pools
- Reservoirs and plants
- Dams and foundation walls
- Plinths
- Floors and walls of wet areas
- Prefabricated systems
- Canals and concrete pipes
- Water tanks and harbours
- Galleries and humid rooms
- Elevator and shafts
- Basements and tunnels,
- Inspection pits and retaining walls
- Lift shafts
- Bridge decks
- Jetties
- Pontoons

It can be used as a water vapor barrier over concrete substrates or over plasters, cement screeds, dry screeds made of cementitious fiber boards, aerated concrete slabs in single coat application.

CEMCOAT can be used as a smooth finish on vertical, overhead and horizontal non-traffic bearing surfaces, as in pools or system floors, sills, parking garages, etc. It can also be used to back-coat pre-cast or tilt-up panels to prevent moisture penetration and dampness.

Advantages

- Rapid and easy application
- Shrink-free and crack-free
- Excellent substrate bonding
- Impermeable even to water under pressure
- Water vapor barrier for cementitious substrates
- Resistant to frost and aging
- Sulphate resistant
- Can also be covered with all types of tiles when using latex modified cement based tile adhesive.
- Can be used in contact with water for human consumption
- Single component, No additional latex is required

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 CEMCOAT 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 CEMCOAT.

Movement Joints

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

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/L and left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

Mixing

Mix 20 kg of CEMCOAT (1 bag) with approximately 6.0 to 6.5 liters water. Mix until a uniform, lump-free and slurry grade mortar is obtained. The mixture should not contain any residue of dry powder. For best results an electric drill mixer (approximately 400rpm) with attached stirrer should be used. Let the mixture rest for about 5 minutes, and remix again shortly before application.

Application

CEMCOAT can be applied with a roller, brush or with a spraying machine. For specified method application, contact Colmef Technical Department.

For positive pressure waterproofing in application such as waterproofing in swimming pools, reservoirs, foundations, basements from outside, etc, the waterproofing is carried out with at least 2 full-surface applications (3 applications in the case of water under pressure).

The first coat of CEMCOAT must always be applied by brush. It must be applied intensively to provide saturation coverage and a closed surface (consumption approx. 1.7 kg/m² for 1 mm thickness).

The second coat can be applied minimum after 6 – 8 hours at +25°C. The consumption should not exceed 1.7 kg/m² per coat to guarantee crack free drying of the waterproofing layer. Do not apply CEMCOAT to frozen substrates, in frost or at high temperatures (substrates temperature should be less than +35°C).

On substrates that are exposed to movements and deformation or where cracks are expected, reinforcing glass fibre mesh shall be spread into the first coat of CEMCOAT before applying adhesives. Tiling or finished floor installations should be carried out as soon as possible after full cure of membrane is established.

Curing & Protection

Surfaces treated with CEMCOAT 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

All tools should be cleaned with water. Cured material can only be removed mechanically.

Recommendations

- During windy or sunny days, spray water onto the surface to avoid the rapid evaporation of water.
- Do not apply at a temperature below +5°C
- Do not use on substrates with possible moving cracks.
- Do not apply higher thickness to avoid possible cracks appearance.
- For application in drinking water tanks, wash the applied coat thoroughly with plenty of water, scrubbing the surface with sponge before using the tank.

Consumption

1.7 kg/m² for 1 mm thickness

Packaging

CEMCOAT is supplied in paper bags of 20 kg

Storage

CEMCOAT should be stored under cover away from extreme heat or direct sunlight or frost. Shelf life is 12 months if stored properly.

Technical Data

Properties	Results
Appearance	Cementitious powder
Colour	light blue, cement grey, white
Mix density	1.7 kg/L
VOC	0.8 g/L
Shore D hardness	30
Vapor permeability (ASTM E96)	5 Perms
Tensile adhesion strength (BS EN 14891)	>2 N/mm ²
Crack bridging	> 0.75mm
Resistance to hydrostatic pressure at 1.5 bar (BS EN 14891)	Passed
Potable water suitability (BS 6920)	Passed
Workability	>30 min
Application temperature	+5°C to +35°C
Open to water exposure	after 7 days
Service temperature	-5°C to +80°C
Can be covered (plaster, tiles, etc.)	after 24 hours

All values are subject to 5-10 % tolerance

Health & Safety

While CEMCOAT is non-toxic, skin and eye contact should be avoided.

Use gloves, protective creams and goggles to avoid the contact with eyes and skin.

In case of skin contact clean immediately with a resin removing cream, followed by soap and water. In case of contact with eyes, use clean water to wash the eyes and seek doctor medical attention immediately.

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DUBAI
ABU DHABI
KSA
ITALY

P.O. Box 123808 Dubai UAE
P.O. Box 127326 Abu Dhabi, UAE
P.O. Box 335896 Code: 11383 - Riyadh KSA
Z.I. Ponte d'Assi 06024 Gubbio (PG)

T. +971 4 8803488 F. +971 4 8803450
T. +971 2 5511949 F. +971 2 5511749
T. +966 1 2654277 F. +966 1 2654335
T. +39 75 9221297 F. +39 75 9221174

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colmef@colmef.ae

www.colmef-me.com