

HYDROCEM 1K FLEX

Single Component Flexible Water Proofing Slurry

Description:

HYDROCEM 1K FLEX highly flexible, single component, sulphate resistant waterproofing slurry that can be applied as a crack-bridging waterproofing layer to concrete structure subject to movement. It can be used as a superior water proofing system for a wide range of applications including, water reservoir, wet area, swimming pools, and suitable for interior and exterior applications. HYDROCEM 1K FLEX characterized with a bonding features with the substrate and acts as both negative and positive waterproofing coating.

Applications:

HYDROCEM 1K FLEX can be applied internally and externally as a water proofing system in several applications including:

- Swimming pools, water reservoirs, dams, canals.
- Foundations, wet areas, plinths and water retaining bodies.
- Water tanks and concrete pipes.
- Concrete and masonry supports against humidity and running water.
- Water vapor barrier over concrete surfaces.
- Back-coat for panels to prevent moisture penetration and dampness.
- Can be used as negative pressure waterproofing system in humid rooms, elevator shafts, basements, tunnels, inspection pits, retaining walls, bridge decks, jetties.
- Can be used as a smooth finish on vertical, overhead and horizontal non-traffic bearing surfaces.

Advantages:

- Single component, easy to mix and apply.
- Excellent mechanical and abrasion resistant.
- Negative and positive pressure applications.
- Excellent resistance to a range of chemicals.
- Excellent adhesion to substrate.
- Provides flexible crack bridging layer when cured.
- Can be used in contact with potable water.
- Compatible with various types of coatings, tile adhesives and topping.
- Impermeable to water under pressure.

Instructions for Use:

Surface Preparation:

All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds; dirt, oil and grease. Ensure that concrete surfaces are cured for at least 14 days before coating the product. Create at junction between wall and floor a 45°C fillet with LAVAREP F40 OR LAVAREP F60.

For hard laitance or contamination, clean the concrete surface with mechanical preparation method, like captive blasting or sand blasting. If the substrate is restricted to access, utilise preparation by handy mechanical tools and wire brush discs.

If any cracks reveals at concrete surface after blasting, check if cracks are superficial or penetrating the concrete body, then check if the crack is static or dynamic. For superficial cracks, apply a cementitious repair mortar. For dynamic superficial crack, apply a paste mixed from the same product HYDROCEM 1K FLEX as filler to the crack. Whereas if the crack is dynamic and penetrating the concrete, use flexible injection resins to fill the cracks prior to application of HYDROCEM 1K FLEX. For concentrated water seepage apply HYDROPLUG mortar to plug and prevent seepage of water. Before application starts, Saturate the substrate with water to eliminate possible water absorption at the moment of application.

Mixing:

HYDROCEM 1K FLEX as a single component dry mix mortar can be mixed on site with water. Pour 6.0 to 6.5 liters of water in a clean vessel then empty the content of the 20 kg bag of HYDROCEM 1K FLEX to the vessel. Mix the product using a slow speed mixer (300-400 rpm) fitted with a suitable paddle for 3 to 5 minutes till a homogenous lump free consistent mix is reached.

Leave the mix for 3 minutes to release the entrapped air within the mix then mix again shortly

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be used within 30 minutes after mixing and stir the mixture frequently. For spray machine application, gauged water may need to adjust. Consult technical department for assistance.

Application:

HYDROCEM 1K FLEX can be applied with a roller, trowel, brush or a spraying machine. Wet the surface of application thoroughly with clean water till a saturated surface dry 'SSD' condition is reached to allow the best adhesion and proper curing of the slurry. In general, it is recommended to apply two coats of the mix. Apply the first coat with roller or brush to the surface in a spread rate of 1.5 kg /m² per coat. Within 5 to 8 hours (depending on the weather conditions) apply the second coat 'green on green' so that a chemical bond is achieved between the two coats, perpendicular to the first coat with same rate of application. A buildup of 3.0 kg / m² will result in a final dry membrane film thickness of 2.00 mm.

Embedding ARMOGLASS Fiber mesh in the system is an option to increase the characteristics of the waterproofing membrane. Fix the mesh in the first coat while still wet and fully cover with the second coat to ensure monolithic integrated membrane layer formed without defected spots. Apply the full thickness of each layer in one application by trowel. Smooth the surface and ensure full surface coverage before HYDROCEM 1K start to cure.

Shelf Life:

HYDROCEM 1K FLEX can be utilized within 12 months of production date if stored in proper conditions in unopened original packing.

Standards:

HYDROCEM 1K FLEX conforms to:

- BS 6920 ,BS 476, Part 6, ASTM E 96
- ANSI 118.1, EN 14891

Cleaning:

Clean all tools with water before product hardens.

Coverage:

HYDROCEM 1K FLEX achieves coverage of 6.60 square meters per bag @ 2.00mm (DFT) thickness.

TECHNICAL PROPERTIES	
Color	: Cement Grey or White. Colored upon request
Tensile Strength	: 4.50 N / mm ²
Resistivity to pressure	: Negative 3 bar Positive 6 bar
Recoating Interval	: 4-8 hours
Bond Strength	: 2.10 N / mm ²
Density	: Wet 1.65 Kg. / Lt. Dry 1.50 Kg. / Lt.
Shore A Hardness	: 30
Pot-life time after mixing at 25°C	: 45 minutes
Heat Resistance	: -30°C to +90°C
Pot life of mix	: 40 minutes @ 25°C
Application temp.	: +5°C to +35°C
Shore D Hardness	: 30
Open to water exposure	: After 7 days
Vapor Permeability (ASTM E96)	: 5 Perms
Tensile Strength	: 3.2 N / mm ²
Adhesive strength	: 2.0 N / mm ²
Water Permeability	: NIL

Packaging:

HYDROCEM 1K FLEX is available in 20 kg recyclable paper bags.

Storage:

Store in original packing in dry conditions away from direct sunlight and high humidity levels.

Health and Safety:

Use goggles and gloves during application. Do not breathe vapor of products. Use only in well ventilated areas. Avoid contact with eyes or skin.

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This technical data sheet is not considered as local building codes. It shall be used as general reference for the product, based on our current knowledge and experience. However the company do not accept any liability arising from the use of its products as it has no direct control on how and where the product is applied.

