HYDROCEM 1K

Single Component Water Proofing Slurry

Description:

HYDROCEM 1K is a cementitious flexible, single component, waterproofing slurry that can be applied as a crack-bridging waterproofing layer, internally and externally, with high bonding features. It consists of cement, graded silica sand, special chemical additives and polymers. Once mixed with water, it becomes a workable, flowable mortar that can be applied easily to both vertical and horizontal all cementitious surfaces.

HYFROCEM 1K stands unique as a liquid applied waterproofing membrane suitable for both negative and positive water proofing applications. When cured, it has excellent bonding strength to the surface and can withstand positive water pressure up to 2.0 bars.

Applications:

HYDROCEM 1K can be applied as a water proofing coating in a variety of application including:

- Swimming pools and water reservoirs.
- Dams and water retaining bodies.
- Water tanks and concrete pipes.
- Shafts, basements and foundations.
- Bathroom, kitchens, lift pits.

Advantages:

- Single component, easy to mix and apply.
- Excellent mechanical and abrasion resistant.
- Negative and positive pressure applications.
- Durable and low maintenance cost.
- Excellent resistance to a range of chemicals.
- Excellent adhesion to substrate.
- Provides flexible crack bridging layer when cured.
- Compatible with various types of coatings, tile adhesives and topping.

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 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. 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 as a single component dry mix mortar can be mixed on site with water. Pour 5.25.0 to 5.5 liters of water in a clean vessel then empty the content of the 25 kg bag of HYDROCEM 1K 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 before application. Mix only enough material that can

HYDROCEM 1K

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

Application:
HYDROCEM 1K 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. for application of water under pressure it is recommended to apply a third coat.

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.

Standards:

HYDROCEM 1K conforms to:
- BS 6920 ,BS 476, Part 6
- ASTM E 96

Packaging:

HYDROCEM 1K is available in 25 kg recyclable paper bags.

Shelf Life:

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

Storage:

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

TECHNICAL PROPERTIES		
Color	:	Cement Grey or White
Tensile Strength	:	3.25 N / mm²
Resistivity to pressure	:	Negative 3 bar
		Positive 5 bar
Recoating Interval	:	4-8 hours
Bond Strength	:	1.70 N / mm²
Density	:	Wet 1.70 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
Service Temp.	:	−5°C to +80°C
Compressive Strength	:	27 N / mm2 @ 28 days
Modulus of Elasticity	:	18 K N/mm² @ 28 days
Initial setting time	:	2 hours @ 20°C
Full cure time at 20°C 50% RH	:	7 days
Water Permeability	:	NIL

Coverage:

HYDROCEM 1K achieves coverage of 6.67 square meters per bag @ 2.00mm (DFT) thickness

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.