

HYDROCEM DWT

Two Part Flexible Water Proofing for Drinking Water Tanks

Description:

HYDROCEM DWT is a two components acrylic modified cementitious waterproofing mortar. It is composed of high-quality binders, Portland cement, silica sand, special hydrophobic agents in powder form (component A) and specially formulated acrylic copolymer in liquid form (component B). It is formulated as an internal water proofing treatment for potable water tank. It is non-toxic and easy to apply, with excellent bonding to concrete and masonry.

Uses:

Typical application fields besides others are as follows:

- Waterproofing of potable water structures.
- Waterproofing of basements and below grade parking structures.
- Waterproofing underneath tiles and natural stones.
- Waterproofing of green roofs.
- Swimming pools and canals.
- Waterproofing for water features works.
- Protection against brackish water.
- Waterproofing and protection in seawater canals and marine structures.

Advantages:

- Non-toxic when cured, suitable for drinking water storage tank.
- Positive pressure applications up to 5 bars.
- Excellent resistance to a range of chemicals.
- Excellent adhesion to sound prepared and concrete substrates.
- Breathable, water vapor preamble.
- Excellent protection against carbon dioxide, chloride ions and water.
- Provides flexible crack bridging up to 2.0 mm.
- Easy to apply by brush or trowel and spray.
- Can be used to waterproof against positive and negative 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 sufficiently cured. Remove harsh non-adherent parts by steel brush or by jet water cleaning. In case of deep contamination, concrete surface should be cleaned by mechanical method, such as captive blasting or sand blasting. If the substrate is restricted to access, utilise preparation by handy mechanical tools and wire brush discs. The substrate must be pore open and load bearing.

Damaged concrete surfaces should be repaired using a suitable repair product as recommended by MATEX Technical Department. Create a 45 corner fillet at the wall/floor junctions, using LAVAREP F40 – a fiber reinforced shrinkage compensated repairing mortar. After blasting the surface, check for any cracks. If the cracks are superficial or penetrating the concrete body, then check if the crack is static or dynamic. Consult MATEX Technical Department for the recommended product for crack repair.

Mixing:

HYDROCEM DWT is supplied in a pre-measured two component kit. Pour the liquid component (B) into a clean container and then add slowly the contents of the powder component (A). Mix the two components with a slow speed mixer (200-300 rpm) fitted with a suitable paddle for an interval of 3-5 minutes until a homogenous lump free consistent mix is reached.

Application:

HYDROCEM DWT can be applied with a trowel, brush or a spraying machine. Wet the surface of application with clean water until a saturated surface dry 'SSD' condition is reached, this allows best adhesion and proper curing of the slurry.

For secured results, it is recommended to apply two coats. Apply the first coat to the surface in a spread

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rate of 1.60 kg/m². With the same spreading rate, apply the second coat at a right angle of the first coat. A buildup of 3.20 kg/m² will result in a final membrane film thickness of 2.00 mm. Embedding a fiber glass mesh in the system is an option to increase the characteristics of the waterproofing membrane. The mesh should be embedded in the first coat while still wet and fully covered with the second coat to ensure monolithic integrated membrane layer formed without defected, air entrapment or wrinkles.

For internal waterproofing of water tanks, wet areas and swimming pools, it is recommended to treat the joints through penetrations with HYDROJOINT TAPE rubber band. Use a brush to apply a strip of HYDROCEM DWT to cover the HYDROJOINT TAPE with 75 mm extra width from both sides of the tape. Make sure that the tape is totally embedded into the wet slurry using a steel trowel. Once the joint treatment is dry, proceed with applying the subsequent coats of HYDROCEM DWT for the entire area.

Standards:

- EN 14891, EN 12390/8
- ASTM C836, D4541-02, D412, D4060, E96
- DIN 1048

TECHNICAL PROPERTIES	
Color	Cement Grey or White
Appearance	Comp. A: powder Comp. B: Liquid
Density	Comp. A (dry): 1.55 ± 0.03 kg/lit Comp. B: 1.05 ± 0.03 kg/lit
Wet Density	1.60 ± 0.03 kg/lit
Potlife time after mixing at 25°C	45 minutes
Temperature of Application	From +5°C to +35°C
Drying Time	8 hours
Bond Strength (ASTM 4541-02)	1.50 N/mm ²
Elongation (ASTM D412)	100% (unbonded)
Tensile Strength (ASTM D412)	>2.5 N/mm ²
Water Impermeability (EN 12390, part 8)	Positive >5 bar; Negative 3 bar
Crack Bridging at Breakage (BSEN 1062)	2.0 mm

Chloride Penetration	NIL
Moisture Vapor Transmission (ASTM E96)	<25 g/m ² /day
Shore A Hardness (ASTM 2240)	30
Abrasion Resistance	Wear index 1
Toxicity (BS 6920)	NIL
Heat Resistance	-30°C to +90°C
Recoating Interval	4-8 hours
Curing Time before Application of Tile	48 hours

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Coverage:

HYDROCEM DWT achieves coverage of 8.5-9.0 square meters per kit @ 2.00mm thickness.

*Coverage rate is an approximate value, and subject to actual site conditions.

Packaging:

HYDROCEM DWT is available in set of 30 Kg. kit (Powder Bag + Liquid Jerkin).

Storage:

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

Shelf Life:

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

Cleaning:

Clean all tools with water before product hardens. Hardened materials can only be removed mechanically.

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Remarks:

- HYDROCEM DWT is a cement product. All precautions for concrete practice must be followed.
- For application in drinking water tanks, wash the applied coat thoroughly with plenty of water while scrubbing the surface with sponge before using the tank.
- During the peak temperature of the day in the summer season, working area should be covered to prevent direct sun effects. Keep mixing tools in shade.

Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist.

FIRST AID:

- Eyes: In the event of accidental splashes, flush with warm water and seek medical advice.
- Skin: Wash skin thoroughly with soap and water
- Inhalation: Remove to fresh air, keep patient rested
- Ingestion: Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to HYDROCEM DWT Material Safety Data Sheet.

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