



HYDROCOAT OSMOCEM



SINGLE PACK, CRYSTALLIZATION WATERPROOFING SYSTEM.

Hydro Coat Osmocem is a mortar with crystallizing osmotic action for water proofing concrete and masonry work against rising and descending damp. It is a single component, thixotropic and resistant to positive and negative hydraulic pressures.

Hydro Coat Osmocem reacts with moisture and creates a continuous barrier of insoluble crystals. The capillaries are permanently blocked to the passage of water. However, vapour may pass through allowing structure to breathe. Rate and penetration of minerals depends on presence of moisture, free lime and density of concrete.

Green Building Rating



Mineral \geq 30%



Low Emission



Solvent < 5 g/kg



Low Ecological Impact



Health Care



Water Based

Areas of Application

- Foundations, hoistway pits
- Underground environments and car parks
- Exterior foundation walls, also with negative hydrostatic thrust
- Irrigation channels, drains, tubs
- Water (also drinking water) collection tanks and reservoirs
- Tunnels, galleries, siphons and dams- viaducts and bridges
- Fresh concrete castings or prefabricated concrete, structural plasters

Features & Benefits

- Single-component, low environmental impact
- Thixotropic, can be sprayed or applied with a trowel to vertical and horizontal surfaces
- Excellent protection of concrete structures, safeguarding against the ingress of Carbon dioxide, chlorides, sulphates, from the action of water containing aggressive carbon dioxide and from freeze/thaw cycles
- Resistant to environmental chemical aggression and suitable for all exposure classes in accordance with Environment.
- Waterproofing product for underground concrete structures under positive and negative thrust / pressure.
- Certified as suitable for the containment of drinking water Resistant to abrasion

Method of Application

Preparation of substrates

1. The substrate must be perfectly cured, free from hygrometric shrinkage, solid (i.e. free of weak or easily removable parts) and free from oil, grease and paint.
2. Check that the concrete contains no traces of parting compound. The most suitable cleaning methods are sandblasting, shot peening or washing with pressurised water.
3. When working on weakened parts, when parts of the substrate are missing and also in the case of gravel beds, the substrate must be restored with Dubond DuceM before application, the substrates must be wet well but must not include any stagnant water In waterproofing operations for exterior foundation walls and underground structures.

Preparation of substrates

Prepare Hydro Coat Osmocem by mixing 10 kg of powder with approximately 3-4 litres of clean water according to the chosen type of application (spreader or brush). Mix with a low-rev, stirring device for approximately 2 minutes until a mixture with a fluid and homogenous consistency is obtained. Pour almost all of the water required into a clean container and gradually add the powder during the mixing operation until the desired consistency is obtained. Leave the mixture to rest for approximately 5 minutes to allow for complete hydration of the micro-components and mix again for approximately 20 seconds before use.

Application

1. Ensure that structure is sound and free from dirt, soil, oil release agents, laitance and any other foreign materials which may impair the bond, penetration and/ or the overall performance of Hydro Coat Osmocem.
2. In case of smooth concrete surface, the surface should be water cleaned / sand blasted or acid etched to ensure that the concrete surface has an open capillary system.
3. Ensure to fill cracks / honeycombs / holes / faulty construction joints with Dubond Acrylic Crack Filler and allow it to touch dry. Ensure to dampen surface lightly before applying Hydro Coat Osmocem to facilitate maximum chemical penetration. It must be applied with a rigid brush in fibre or with a spreader, depending on the type of work required (simple waterproofing or simultaneous levelling of the substrate). Make adjustments to the mixing water in order to obtain a consistency suitable for the required application.
In case of highly porous, damaged, efflorescence substrate, it is recommended to use Hydroprime as a first coat to facilitate the maximum chemical penetration.
4. Add 4 – 4.5 Ltrs of water with 10 Kgs of Hydro Coat osmocem , stir the mix thoroughly to form slurry and apply, in specified quantities, by stiff bristle brush or squeegee. Ensure to prepare only as much amount of slurry as can be applied during its pot time i.e. 20 minutes. (can add or reduce water as per the site conditions)
5. Ensure the desired thickness in each coat of application. Apply the first coat on a substrate moistened to saturation point but without the presence of stagnant water. Once the product has hardened, apply a second coat (normally 4-6 hours, depending on climatic conditions and the degree of absorbency of the substrate. In any case do not apply the second coat after a period of 24 hours). Apply the second coat in a criss-cross direction as compared with the first coat. The layers of hydro coat Osmocem must be applied with great care to ensure complete coverage of surfaces and proper connection of the walls and horizontal surfaces by means of connection shells. For horizontal surface apply in one coat while for vertical surface apply in two coats. Apply second coat when first coat is touchdry. Glass fiber mesh can be used as a sandwich between the layers of coat as reinforcement system which ensures tight bonding to restrain from the hydrostatic pressure.
6. Light spray of water may be required between coats in hot/ dry climates.
7. In extreme hot weather and very low humidity conditions, ensure curing as soon as the Hydro Coat Osmocem coating has hardened sufficiently.
8. After 36 – 48 hours of the application of 2 coats ponding can be done to the satisfaction of the engineer for the final testing of waterproofing. Recommended for 3 to 4 days.

Precautions & Limitations

Do not use Hydro coat Osmocem on rough terraces, non-structural substrates, flexible substrates, walls of gypsum, plasterboard or gypsum-base plasters.

Technical Information

Appearance	White powder
Mineralogical nature	silicate – crystalline carbonate
Mixing water	
Application with spreader	4 liters / bag 10 kg
Application with brush	5 liters / bag 10 kg
Mixture spread	85%
Specific weight	1.73 Kg / dm ³
pH	≥12
Pot Life	1 Hour
Temperature range of application	from +5°C to +35°C
Waiting time	
For laying of covering material	24 hours
For application of rough coat	24 hours
Resistance to positive pressure of water	
Thickness of 1mm	≥1 bar
Thickness of 2mm	≥3 bar
Containment of drinking water	suitable
Adhesion to concrete after 28 days	≥3 Nmm ² EN 1542
Compressive strength after 28 days	≥25 Nmm ² EN 196/I
Resistance to abrasion resistance after 28 days	≤3 g ASTM D 4060
Resistance to sulphates (penetration)	Nil
Resistance to Chloride (penetration)	Nil

Coverage

1.5 – 1.62 M² / Kg with single coat for concrete surface (brush coat)
2 – 2.5 M² / Kg with single coat over china mosaic.(brush coat)

Packing

1 Kg, 5 Kg & 10 Kg bag.

Shelf life & storage

6 months in original unopened sealed condition.

Health & Safety Precautions :

Use mask, nose cover and hand gloves during application. Clean hands with soap water after application. Avoid contact with skin / eyes. In case of unlikely contact with eyes, rinse immediately with plenty of clean water, then cleanse with soap and lukewarm water and seek medical advice. Do not use solvent to clean the contacted area. In case of unlikely swallowing, seek medical attention immediately. Do not induce vomiting.

DISCLAIMER The product information & application details given by the company & its agents has been provided in good faith & meant to serve only as a general guideline during usage. Users are advised to carry out tests & take trials to ensure on the suitability of products meeting their requirement prior to full scale usage of our products. Since the correct identification of the problems, quality of other materials used and the on-site workmanship are factors beyond our control, there are no expressed or implied guarantee / warranty as to the results obtained. The company does not assume any liability or consequential damage for unsatisfactory results, arising from the use of our products.

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