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CEM-KOTE BARRIER COTE 100

Polymer-Modified Cement Waterproofing Coating & Bonding Agent

DESCRIPTION

CEM-KOTE BARRIER COTE 100 is a two-component system consisting of dry component A and liquid component B. For additional tensile strength and crack bridging, REINFORCING FABRIC HD may need to be used throughout. CEM-KOTE BARRIER COTE 100 has excellent bond to clean, structurally sound concrete, provides substrate crack spanning, and has excellent freeze/thaw resistance.

USES

CEM-KOTE BARRIER COTE 100 is a waterproofing and heavy-duty and high impact resistant traffic coating with excellent UV resistance. (Does not degrade.) The product is suitable as a high-traffic coating for new concrete or for resurfacing of parking garages, industrial floors, loading docks, etc. CEM-KOTE BARRIER COTE 100 is used as a bonding agent for highly contaminated substrates, including oil-contaminated concrete.

CEM-KOTE BARRIER COTE 100 can also be used as a negative/positive side waterproofing and chemically protective coating, since it has excellent resistance to concentrated salt solutions and alkalis.

Dynamic (moving) substrate cracks should be treated using CEM-KOTE FLEX ST reinforced with REINFORCING FABRIC HD or REINFORCING FABRIC NW prior to the application of CEM-KOTE BARRIER COTE 100. In some instances, cracks can be routed out and filled with FIBRE-PATCH OV.

FEATURES/BENEFITS

- Superior toughness in thin section
- High abrasion resistance
- Long-term crack resistance
- Superior freeze/thaw resistance
- Excellent salt scaling resistance
- Reduces chloride penetration into concrete; protects reinforcing steel from corrosion
- Self-curing
- Continuous water immersion possible
- Superior negative/positive water proofing
- Very low shrinkage
- Will not crack on drying shrinkage
- Non-toxic
- Easy mixing and application – sprayable

PACKAGING

Component A: 50 Lb. (22.7 kg) Bag
Component B: 1.8 Gal. (6.8 L) Unit

COVERAGE/YIELD

Approximate coverage is 100 ft.^{2} @ 60 mils (8.7 m^2 @ 1.6 mm) per kit, applied at two 30 mil coats. Used as bonding agent, yield is approximately 200 ft.^{2} (20 m^2) per kit. Actual coverage will depend on surface roughness, porosity, and thickness applied. The applicator must conduct a sample application to determine actual coverage for given substrate and required thickness.

SHELF LIFE

When stored on pallets in a dry, cool area, shelf life is 12 months.

TECHNICAL DATA

Modulus of Rupture (ASTM C438)	1570 - 1710 psi (10.8 - 11.8 MPa)
Ultimate Tensile Strength (ASTM D412 Mod)	680 - 770 psi (4.7 - 5.3.MPa)
Compressive Strength (ASTM C109)	6380 - 6610 psi (44 - 45.6 MPa)
Freeze-Thaw Resistance (ASTM C666, Procedure A)	0% weight loss after 300 cycles
Direct Tension Bond	170 - 350 psi (1.2 – 2.4 MPa) Failure in concrete substrate
Resistance to Chloride Penetration (AAHSTO T259)	No chloride penetration
Resistance to Chloride Penetration (AASHTO T277)	300 - 400 Coulombs
Color	Light Gray
VOC Content	0 g/L

All technical data is typical information, but may vary due to testing methods, conditions, and operators.

APPLICATION

Mixing … Mix the dry component A with the liquid component B using a clean mortar mixer (paddle or screw) or heavy-duty high torque, low speed drill (400 - 600 RPM) with a suitable mixing paddle. Pour all the liquid into the mixing container and mix while gradually adding the dry material into the liquid and mix until a smooth and lump-free mix is obtained. Lumps will form if the dry material is added suddenly into the liquid.

Surface Preparation … Prepare concrete substrate in accordance with ICRI Technical Guideline No 310.2-1997: Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays.

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Mechanically roughen or high-pressure water-jet [typically 5000 psi (34.5 MPa) minimum water pressure] the existing concrete substrate to an ICRI concrete surface profile (CSP) of CSP-4 or higher. Remove all unsound concrete and provide a profiled, porous surface. The substrate must also be structurally sound, dust-free, and free of grease, oil, dirt, curing compounds, release agents, or any other surface or penetrated contaminants, coatings, or similar materials that will adversely affect the bond. Sanding, power-washing, grinding or wire-brushing are not approved surface preparation methods.

Pre-saturate the concrete surface for two hours prior to installation to ensure that substrate is in a saturated, surface dry (SSD) condition and free of standing water.

Repair deeper areas using SPECTRUM RE-KOTE TF or MEADOW-CRETE® GPS from W. R. MEADOWS.

Application Method … Apply CEM-KOTE BARRIER COTE 100 to the saturated, surface damp concrete. Spray, trowel, or brush apply at 30 mils (0.76 mm) per coat. Apply two coats for a total of 60 mils (1.6 mm). When spraying, brush each coat well to eliminate any potential for pinholes. Apply the second coat to the first coat once the first coat has taken an initial set, but has not dried.

REINFORCING FABRIC HD should be used over cracks or throughout, depending on project. REINFORCING FABRIC NW is used only over cracks on elevated slabs. Embed REINFORCING FABRIC HD or REINFORCING FABRIC NW completely into the first coat, followed by the second coat to assure full coverage. The second coat must be brushed to make the surface smooth and free of wrinkles. The Reinforcing Fabric must have 100% contact with the substrate with no air pockets, and must be fully covered by CEM-KOTE BARRIER COTE 100 - it must not protrude through the surface. This is especially important in applications where the smooth surface is required to minimize the solids pickup, such as waste water treatment facilities. The minimum applied thickness is 80 mils (2 mm) including the REINFORCING FABRIC HD.

Curing … Cure CEM-KOTE BARRIER COTE 100 by air drying for a minimum of three days prior to continuous water exposure or before application of the non-breathable coating (urethane or epoxy).

Protect fresh applications from rain, strong wind, and intense sunlight for 12 hours. When working under tarps at freezing temperatures, avoid using propane heaters. Electrical heaters must be used to prevent carbonation of the material.

Surface Applied Coatings … Allow CEM-KOTE BARRIER COTE 100 to cure for three days at 75° F (23.9° C) prior to application of most standard surface applied coverings and coatings, such as paints or epoxy overlays. Wait 28 days prior to application of urethane overlays, unless an epoxy or suitable primer is applied prior to application of the urethane overlay or as recommended by the urethane or coating manufacturers. Use only 100% solids coatings that are suitable for use with cementitious materials and water-based coatings.

Adhere to all of the surface covering manufacturer's recommendations. This data sheet does not supersede any of the surface covering manufacturer's requirements. Always conduct a small demo application to ensure appropriateness and appearance.

LIMITATIONS/PRECAUTIONS

Do not apply CEM-KOTE BARRIER COTE 100 when the temperature is expected to be below 45° F (7° C) within 48 hours or when rain is imminent. Follow "hot concreting" procedures when applying product at temperatures exceeding 77° F (25° C). Do not apply above 95° F (35° C) Protect component B from freezing. Do not bridge moving cracks. Extend existing control and expansion joints through CEM-KOTE BARRIER COTE 100. Avoid steel-wheeled traffic in thin applications. Thin applications subjected to high point loading should also be avoided. Realize that set time will decrease as the product, air, substrate, and mixing liquid temperature increases and will be increased as the temperature decreases. Protect from conditions that may cause early water loss: high winds, low humidity, high temperature, direct sunlight.

HEALTH AND SAFETY

Avoid direct contact with this product, as it may cause skin and eye irritation. Utilize gloves and safety glasses to minimize direct contact. Avoid inhalation of dust. Inhalation may cause respiratory irritation and/or lung disease (silicosis). This product contains silicon dioxide, which is classified by the IARC and NTP as probably carcinogenic to humans (IARC Group 2A). The use of NIOSH-approved respiratory protection is recommended in dusty environments. Refer to Safety Data Sheet for complete health and safety information.

Keep product out of reach of children. Not for consumption.

For most recent data sheet, LEED information, and SDS, visit www.gemite.com.

LIMITED WARRANTY

W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

Disclaimer

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