



## Cem-Kote® Barrier Cote 100

### Multi-purpose polymer modified cement waterproofing thin coating – topping – bonding agent

#### FEATURES

- Superior toughness in thin section
- Adhesion to asphalt surfaces
- High abrasion resistance
- Long term crack resistance
- Superior freeze/thaw resistance
- Excellent salt scaling resistance
- Effective protection against high range of chemicals
- Self-curing
- Continuous water immersion possible
- Superior negative/positive waterproofing
- Water vapour retarder
- Very low shrinkage
- Will not crack on drying shrinkage
- Non-toxic
- Easy mixing and application, sprayable

#### DESCRIPTION

##### *Basic Use*

**Cem-Kote Barrier Cote 100** is a high performance, heavy duty waterproofing cement coating – thin topping. It is designed for a variety of uses in waterproofing, resurfacing of high traffic areas, or areas with high impact or abrasion resistance requirements such as in parking garages, industrial floors, loading docks and many others. **Cem-Kote Barrier Cote 100** is also used as a bonding agent in applications when dealing with highly contaminated concrete, including oil contaminated concrete. In these applications a special methodology is required. Contact Technical Services for further information. It can also be used in negative and positive side waterproofing and in chemical protection of concrete. An additional unique application includes the use of **Cem-Kote Barrier Cote 100** as a water vapour retarder in application on concrete slabs exhibiting a high water vapour transfer. When dealing with dynamic (moving) substrate cracks, **Cem-Kote Flex Plus** reinforced with the **Reinforcing Fabric HD** is applied over the crack prior to the application of **Cem-Kote Barrier Cote 100**, to provide crack bridging. In some instances, the crack is routed out and filled with

**Gem-Cote EP ST** epoxy mortar. Contact Technical Service prior to preparation of specification or use for further information regarding the use of this product. The applicator must, prior to bidding a project, confirm the details of surface preparation and detailing with Technical Services.

##### *Composition and Materials*

**Cem-Kote barrier Cote 100** is a high performance, Portland cement based material. It is a two component system consisting of dry powder blend (Component A) and a liquid additive, (Component B). For additional tensile strength and crack bridging, it is reinforced with the **Reinforcing Fabric HD**. **Cem-Kote Barrier Cote 100** exhibits an excellent bond to clean, structurally sound concrete, substrate crack spanning, weather and freeze/thaw resistance. **Cem-Kote Barrier Cote 100** is mixed on site and applied by trowelling, spraying or brushing.

##### *Limitations*

Do not apply **Cem-Kote barrier Cote 100** when the temperature is expected to be below 4°C (40°F) within 48 hours or when rain is imminent. Follow “hot concreting” procedures when applying **Cem-Kote barrier Cote 100** at temperatures exceeding 25°C (77°F). The proper surface preparation is essential for a successful concrete repair using **Cem-Kote barrier Cote 100**. Consult Technical Services before starting a project to ensure that correct surface preparation and application procedures are followed.

##### *Health and Safety*

**Cem-Kote barrier Cote 100** is non-toxic. Your skin might be sensitive to hydraulic cement or the liquid additive. We recommend use of rubber gloves. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water. Seek medical advice if irritation occurs. Harmful if digested. Keep product out of reach of children. **FOR INDUSTRIAL USE ONLY**. Consult MSDS for additional information.

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### Colour

**Cem-Kote barrier Cote 100** is available in industrial grey.

### Packaging

**Cem-Kote barrier Cote 100**, Component A is a dry material packaged in 22.7 kg (50 lbs.) paper bag. The Component B, 5.9 litres (1.55 gallon U.S.) is a liquid additive, packaged in a plastic container.

### Yield

The theoretical coverage of **Cem-Kote barrier Cote 100** is 8.73 m<sup>2</sup> (93.89 ft<sup>2</sup>) at 1.6 mm (64 mils) thickness; 6.98 m<sup>2</sup> (75.12 ft<sup>2</sup>) at 2 mm (80 mils). The typical thickness is approximately 1.6-2 mm. The actual coverage will depend on surface roughness and the thickness applied. When used as bonding agent, the typical coverage is 20 m<sup>2</sup> (200 ft<sup>2</sup>) per unit, but it can vary considerably depending upon the surface roughness and porosity. The applicator must, in each case, carry out a sample application to determine the actual coverage for the given substrate and application thickness.

### Storage and Transportation

When stored in dry area, the material has a shelf life of 12 months. The liquid component B must not freeze.

### TECHNICAL DATA

Modulus of Rupture (ASTM C348)	10.3 – 11.0 MPa (1,500 – 1,600 psi)
Ultimate Tensile Stress	4.4 – 5.0 MPa (650 – 725 psi)
Compressive Strength (ASTM C109)	34.5 – 34.0 MPa (5,000 – 5,500 psi)
Freeze-Thaw Resistance (ASTM C666, Procedure A)	0% weight loss after 300 cycles
Direct Tension Bond	1.0 – 3.5 MPa (150 – 500 psi) Failure in concrete substrate
Resistance to Chloride Penetration (AAHSTO T259)	No chloride penetration
Resistance to Chloride Penetration (AASHTO T277)	300 – 400 Coulombs
Salt Scaling Resistance (MTO Ontario, For 1351)	Accumulative weight loss. 50 cycles, 0.004g/cm <sup>2</sup>

### INSTALLATION

#### Mixing

Mix the content of the bag, 22.7 kg (50 lbs.), component A with the liquid component B. Use clean standard paddle or helix screw type mixer or heavy duty drill (400-600 rpm) with a mixing paddle. Pour approximately 80% of the liquid component B into the mixing container (mixer) and gradually add 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. Depending on application, add the remaining liquid as required for a given application consistency. A small amount of water can be added if required at higher ambient temperatures.

#### Application

Remove all deteriorated concrete. Remove all loose and oil or grease contaminated concrete laitance, dust, dirt and efflorescence. Clean the surface using dry or wet sandblast, shotblast, high pressure water. Repair deeper areas using **Gem-Plast TC** or **Fibre-Patch**.

Pre-fill all the cracks with **Cem-Kote Flex Plus**.

Contact Technical Service for detail surface preparation instructions. Apply **Cem-Kote barrier Cote 100** to a saturated surface dry (SSD) or saturated surface “damp” surface. Trowel or brush apply 1.6 to 3 mm (1/16 to 1/8”) thick layer in two coats. When applying the **Reinforcing Fabric HD**, apply first a thin layer of material by brush or spraying. When using spraying, brush the coats to eliminate all the “pin holes”. Embed the **Reinforcing Fabric HD** into the first coat and follow with the second coat, brush or spray again; when using spraying, brush the layer. Make the surface smooth, free of wrinkles. The fabric must be just covered by the cement material; it must not protrude through the surface. This is especially important in applications where the smooth surface is required to minimize the solids “pick up”, e.g. in the waste water treatment facilities. Typically the minimum thickness of this application is 2 mm, including the **Reinforcing Fabric HD**. Cure **Cem-Kote barrier Cote 100** by air drying. The material must be air dry cured for a minimum 3 days prior to a continuous exposure to water. Protect fresh applications from rain, strong wind and intense sunlight for 12 hours. When working under tarps at freezing temperatures, avoid using propane heaters; the electrical heaters must be used to prevent “carbonation” of the material.

### MAINTENANCE

None required

### WARRANTY

A limited twelve (12) month Material Replacement Warranty is available. For details contact Technical Service.

### TECHNICAL SERVICE

For advice on suitability of **Cem-Kote barrier Cote 100** for a specific application, specification assistance and application instructions contact Technical Services at 1-800-563-3618.

### Short Specification

The surfacing/waterproofing/bonding agent will be **Cem-Kote barrier Cote 100** a polymer modified cement, (reinforced with the **Reinforcing Fabric HD** or non-reinforced, as specified), manufactured by Gemite Products Inc. It will be mixed and applied according to current manufacturer's specifications and recommendations. Contact Technical Services for assistance and application instruction. The suitability of the surface preparation method must be checked with Technical Services before starting each project.

### MANUFACTURER

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