

PRODUCT NAME

Cem-Kote[®] Barrier Cote 100

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

MANUFACTURER

Gemite[®] Products Inc.

USA

160-3480 East Robinson Rd.
Amherst, N.Y. 14228
Phone 800-724-5944
Fax 716.835.9100

CANADA

1787 Drew Road
Mississauga, Ontario L5S 1J5
Phone 905-672-2020
Fax 905.672.6780

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

PRODUCT 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 Gemite Technical Service for further information. It can also be used in negative and positive side waterproofing and in chemical protection of concrete. Additional unique application includes the use of *Cem-Kote Barrier Cote 100* as 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 Gemite 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 Gemite Technical Service.

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 40°F (4°C) within 48 hours or when rain is imminent. Follow "hot concreting" procedures when applying *Cem-Kote Barrier Cote 100* at temperatures exceeding 77°F (25°C). The proper surface preparation is essential for a successful concrete repair using *Cem-Kote Barrier Cote 100*. Consult Gemite Technical Service 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.

Colours

Cem-Kote Barrier Cote 100 is available in industrial grey colour.

Yield

The theoretical coverage of *Cem-Kote Barrier Cote 100* is 93.89 ft² at 1/16 in thickness, (8.73 m² at 1.6 mm; 6.98 m² at 2 mm). 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 m² (200 ft²) 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.

Gemite Products Inc.
June 2001

07100

High Performance Cementitious Waterproofing Coteing - Topping

Packaging

Cem-Kote Barrier Cote 100, Component A is a dry material packaged in 22.7 50 lbs (22.7 kg) paper bag. The Component B, 1.60 USG (6.1 L) is a liquid additive, packaged in a plastic container.

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 (AAH-STO T259)	no chloride penetration
Resistance to Chloride Penetration (AASHTO T277)	300-400 Coulombs
Salt Scaling Resistance (MTO Ontario, Form 1351)	accumulative weight loss, 50 cycles, 0.004g/cm ²

INSTALLATION

Mixing

Mix the content of the bag, 50 lbs (22.7 kg) , component A with the liquid component B. Use clean standard paddle or helix screw type mortar 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*. Prefill all the cracks with *Cem-Kote Flex Plus*.

Contact Gemite 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 1/16 to 1/8 in, (1.6 to 3 mm) 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 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.

AVAILABILITY AND COST

Cem-Kote Barrier Cote 100 is available worldwide. Contact Gemite Products Inc. for the name of the Representative/Distributor nearest you and pricing information. Packaged in 22.7 kg (50 lbs) multi-wall paper bags (Component A) and 5.3 L (1.4 US G) plastic container (Component B). Do not use hooks. Use reasonable care in transportation. Will last for one year when stored in dry areas. Protect from inclement weather when storing on site.

MAINTENANCE

None required

WARRANTY

A limited, twelve (12) months, Material Replacement Warranty is available. Contact Gemite Technical Service for further information.

TECHNICAL SERVICE

For technical advice on the suitability of *Cem-Kote Barrier Cote 100* for a specific application, specification assistance and application advice, contact Gemite Technical Service: USA 800-724-5944 or Canada 905-672-2020.

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.[USA 800-724-5944], [Canada 905-672-2020]. It will be mixed and applied according to current manufacturer's specifications and recommendations. Contact Gemite Products Inc., or a local Representative for assistance and application instruction. The suitability of the surface preparation method must be checked with Gemite Technical Service before starting each project.