

PRODUCT NAME

Cem-Kote® Flex Plus

Flexible Cementitious Waterproofing

MANUFACTURER

Gemite® Products Inc.

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FEATURES

- Excellent flexibility at low temperatures
- Substrate crack spanning, up to 2.5mm
- Superior waterproofing (negative & positive)
- Long term crack resistance
- Excellent salt scaling resistance
- Effective protection against acid rain
- Self-curing
- Continuous water immersion possible
- Superior freeze/thaw resistance
- Highly breathable
- Very low shrinkage
- Salt resistant
- Non-toxic
- Potable water approved
- Easy mixing and application = sprayable

PRODUCT DESCRIPTION

Basic Use

Cem-Kote Flex Plus is designed for waterproofing and crack spanning in thin sections when a superior flexibility, or low temperature flexibility is required. It provides an excellent negative and positive side waterproofing.

When exposed to low temperatures and in new construction where a superior flexibility is required (waste water treatment facilities), *Cem-Kote Flex Plus* is reinforced with the *Reinforcing Fabric HD* throughout. In restoration, *Reinforcing Fabric HD* is used just over the cracks to provide bridging

Composition and Materials

Cem-Kote Flex Plus is a highly flexible, hydraulic cement based two component system consisting of dry Component A and liquid Component B.

Limitations

Do not apply *Cem-Kote Flex Plus* when the temperature is expected to be below 4 °C (40°F) within 48 hours or when rain is imminent. Follow Hot Weather concreting procedures when applying *Cem-Kote Flex Plus* at temperatures exceeding 25°C (77°F). *Cem-Kote Flex Plus* is not designed for a high traffic area.

Health and Safety

Cem-Kote Flex Plus 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.

Color

Industrial Grey, Light Grey and White. Other colours are available on request.

Packaging

Cem-Kote Flex Plus consists of dry Component A, packaged in 16.0 kg (35.2 lbs) bags and liquid Component B, packaged in 6.5 L (1.7 USG) plastic containers. *Industrial Grey* 6.5 L (1.7 USG); *Light Grey* 7.4 L (1.95 USG). (Note:special fomulations, depending on colour, contain varying amounts of Component B).

Yield

Cem-Kote Flex Plus (Ind. Grey) with 6.5 L *Component B* yields 12.9 L (0.46 ft³) and covers approximately 8.06 m² @ 1.6 mm (86 ft² @ 63 mils) per kit, applied in two (2) coats. The Light Grey materials with 7.4 L (1.95 USG) yields 13.8 L (0.49 ft³) and covers approximately 8.63 m² (92.8 ft²). Special formulations, with a higher volume of the Component B, have a slightly higher yield, depending on specific formulation. The actual coverage will depend on surface roughness and the thickness applied. The applicator must 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 Component A has a shelf life of 12 months. The liquid Component B must not freeze. Packaged 40 kits per pallet.

TECHNICAL DATA

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|---|---|
| Ultimate Tensile Strain (ASTM D 412 Mod.) | |
| at 20°C, non-reinforced | 35-70 % |
| at 20°C, reinforced | 40 % |
| Ultimate Tensile Stress (ASTM D 412 Mod.) | |
| at 20°C, non-reinforced | 0.38-0.55 MPa (55 - 80 psi) |
| at 20°C, reinforced | 3.1 MPa (450 psi) |
| Crack Spanning (Gemite ISO TP 005) | |
| at 20°C, non-reinforced | 0.8 mm (0.032") |
| at 20°C, reinforced | 2.5 mm (0.100") |
| Water Vapor Permeance, 1.6 mm thick coating, (ASTM E96 dry cup) | |
| | 257 ng/Pa.s.m ² (4.49 perms) |

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July 1998

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09820 Flexible Cementitious Coatings
07145 Cementitious Waterproofing

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|---|--|
| Water Vapor Permeability, (Engelfried-Klopfer, Sd < 3 m) | S _d = 0.720 m (134 mils) |
| Salt Scaling Resistance (ASTM 672) | excellent |
| Hydraulic Impermeability (negative side) (TT-P-1411, 2 mm thickness) | water head >126ft (>38.4 m) |

INSTALLATION

Current Guide Specification and Application Instructions contain additional information specific to each application and must be followed. The applicator must, prior to bidding a project, confirm the details of surface preparation, detailing and the use of the *Reinforcing Fabric HD* with Gemite's Technical Service

Surface Preparation

Remove all deteriorated and loose concrete, form release agents, oil, grease, laitance, dust, dirt and efflorescence by dry or wet sandblast, shotblast, or high pressure water (4,000-6,000 psi; 27.6-41.4 MPa). Repair deeper areas using *Gem-Plast TC* or *Fibre-Patch OV*. The proper surface preparation is essential for a successful waterproofing and concrete repair using *Cem-Kote Flex Plus*.

Reinforcing Steel

Remove all loose rust from any exposed reinforcing steel and apply two coats of *Fibre-Prime* rustproofing.

Crack Treatment

All cracks must be treated using *Cem-Kote Flex Plus* and *Reinforcing Fabric HD*. Pre-fill any open cracks with *Cem-Kote Flex Plus*. Apply a thin coat *Cem-Kote Flex Plus*, 15-25 cm (6-10 in) wide, over the crack. Embed a strip of the *Reinforcing Fabric HD* into the wet *Cem-Kote Flex Plus* and apply a second coat to fully cover the *Reinforcing Fabric HD*. The total applied thickness should be 1.6-2 mm (60-80 mils).

Mixing

Thoroughly mix liquid Component B prior to its use. Use clean paddle, helix mortar mixer, or heavy duty drill (400-600 RPM) with a mixing paddle. Pour approximately 80% of the Component B into the mixer and gradually add the dry material into the liquid. Mix until a smooth and lump free mix is obtained. 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

Apply *Cem-Kote Flex Plus* to a saturated surface dry (SSD) or saturated surface damp surface. Trowel or brush apply 1.6 to 2 mm, (60 - 80 mils) thick layer in two coats. *Cem-Kote Flex Plus* can be also spray applied using a hopper gun or positive displacement, (moyno or carousel) pump with a suitable plastering spray nozzle with compressed air at the nozzle. The recommended hose diameter is 25 mm (1 in). When using spraying, both coats need to be brushed, to achieve the continuity of the coating, and elimination of pin-holes. When spraying avoid a localized "build-up" of the coating, this could result in formation of plastic shrinkage cracking - "mud cracking". If the "build up" accidentally occurs, use brush to spread it out.

The second coat must be applied into a wet first coat, as soon as the first coat allows the application of the second coat. The time between the

coats will depend on temperature, relative humidity, surface porosity, wind, sun etc. The delayed application of the second coat could result in its de-bonding. If the coat is left to dry overnight, clean the surface with a high pressure water, 10-14 MPa (1,500 - 2,000 psi) and let dry prior to application of the next coat

Reinforcing Fabric

In some projects the *Reinforcing Fabric HD* may have to be used throughout. When using the *Reinforcing Fabric HD*, apply first a thin layer of *Cem-Kote Flex Plus* by brushing or spraying. When spraying, brush each coat to eliminate all "pinholes". Embed the *Reinforcing Fabric HD* into the first coat and follow with the second coat. The *Reinforcing Fabric HD* must be fully covered and must not protrude through the surface. The total applied thickness of *Cem-Kote Flex Plus*, including the *Reinforcing Fabric HD*, should be 1.6 - 2 mm (60-80 mils).

Curing

Cure *Cem-Kote Flex Plus* by air drying for a minimum of 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, use electrical heaters. Avoid using propane heaters to prevent "carbonation" of the material.

Clean Up

All tools must be cleaned with water immediately after use. Cured material can only be removed mechanically.

AVAILABILITY AND COST

Cem-Kote Flex Plus is available worldwide. Contact Gemite Products Inc. for the name of the Representative/Distributor nearest you and pricing information.

MAINTENANCE

None required.

WARRANTY

A limited twelve (12) month Material Replacement Warranty is available. For complete details contact Gemite's Head Office.

TECHNICAL SERVICE

For technical advice on the suitability of *Cem-Kote Flex Plus* for a specific application, specification assistance and application advice, contact Gemite Technical Service at US 888-443-6483 or Canada 905-672-2020.

Short Specification

The waterproofing will be *Cem-Kote Flex Plus*, a highly elastic, polymer modified cement, manufactured by Gemite Products Inc. [USA 888-443-6483] [Canada 905-672-2020]. It will be mixed and applied according to the current manufacturer's specifications and recommendations. Contact Gemite Products Inc., or a local Representative for Specification Assistance and Application Instructions.