



DATA SHEET NO. 8138-115

CEM-KOTE™ FLEX CR

Flexible, Hydrogen Sulfide Resistant, Cementitious Waterproofing

FEATURES

- Excellent resistance to sulfuric acid generated from hydrogen sulfide
- Flexible
- Good chemical resistance
- Long term crack resistance
- Superior freeze/thaw resistance
- Excellent bond to clean substrate
- Self-curing
- Breathable
- Very low shrinkage
- Vermin proof
- Non-toxic
- Easy application

PRODUCT DESCRIPTION

Basic Use

CEM-KOTE FLEX CR is primarily designed for waterproofing and protection of concrete structures exposed to sulfuric acid, generated by micro-biological oxidation of hydrogen sulfide. This includes concrete structures in waste water treatment facilities, such as digesters, sludge tanks, clarifiers, manholes, and sewer systems. It is also used in waterproofing and restoration of concrete structures in thin sections, where superior flexibility, chemical resistance, and breathability are required. It protects and waterproofs structures subjected to various chemicals, such as concrete floors, tanks, and secondary containment structures. It also acts as excellent protection for concrete against carbonation.

Composition and Materials

CEM-KOTE FLEX CR is a highly flexible, fibre-reinforced, hydraulic cement based material. It is a two-component system consisting of dry Component A and liquid Component B. For additional tensile strength, it may be reinforced with **REINFORCING FABRIC HD**.

Limitations

Do not apply **CEM-KOTE FLEX CR** when the temperature is expected to be below 4°C within 48 hours or when rain is imminent. Follow hot weather concreting procedures when applying **CEM-KOTE FLEX CR** at

temperatures exceeding 25° C. Not designed for heavy traffic areas.

Health and Safety

CEM-KOTE FLEX CR 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.

Colour

Dark Grey.

Packaging

CEM-KOTE FLEX CR dry Component A is packaged in 16 kg bags and liquid Component B is packaged in 4.9 L plastic jugs.

Yield

CEM-KOTE FLEX CR yields 10.4 L (0.37 ft.³) and covers approximately 6.5 m² @ 1.6 mm (73.6 ft.² @ 60 mils) thickness per kit, applied in two (2) coats. 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 a dry area, the material has a shelf life of 12 months. The liquid Component B must not freeze.

TECHNICAL DATA

Tensile Elongation	10-20%
Salt Scaling Resistance ASTM 672	Excellent
Chemical Resistance	Available on request

CEM-KOTE FLEX CR exhibits a high resistance to a majority of mineral acids in moderate concentrations for shorter periods of time. It is highly resistant to concentrated salt solutions and caustic environments.

Continued over ...

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INSTALLATION

Current guide specification and application instructions contain additional information specific to each application and must be followed. Consult GEMITE or W. R. MEADOWS Technical Service to ensure correct surface preparation, application procedures, and chemical compatibility for your application.

Surface Preparation ... Remove all deteriorated and loose concrete, form release agents, oil, grease, laitance, dust, and efflorescence by dry or wet sandblast or shotblast to achieve a concrete surface profile (CSP) of CSP 3 as per the International Concrete Repair Institute (ICRI). Repair deeper areas using GEM-PLAST TC or FIBRE-PATCH OV. The proper surface preparation is essential for a successful waterproofing using CEM-KOTE FLEX CR.

Reinforcing Steel ... Remove all loose rust from any exposed reinforcing steel and apply two coats of **PATCH-PRIME™** rustproofing from W. R. MEADOWS.

Crack Treatment ... All cracks must be treated using **CEM-KOTE FLEX CR** and **REINFORCING FABRIC NW**. Pre-fill any cracks larger than 2 mm (80 mils) with **CEM-KOTE FLEX CR**. Apply a thin coat of **CEM-KOTE FLEX CR** 15 - 25 cm (6 - 10") wide over the crack. Embed a strip of **REINFORCING FABRIC NW** into the wet **CEM-KOTE FLEX CR** and apply a second coat to fully cover **REINFORCING FABRIC NW**. Note: In some applications, **REINFORCING FABRIC HD** may be used throughout the entire **CEM-KOTE FLEX CR** layer. Please contact **GEMITE** or **W. R. MEADOWS** technical services for further information.

Mixing ... Thoroughly mix the liquid Component B prior to use. Use a 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 and 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 CR** to a saturated surface dry or saturated surface damp surface. Trowel or brush apply two coats to build a 1.6 – 3 mm (63 – 120 mils) thick layer of **CEM-KOTE FLEX CR**. It can also be spray applied using a hopper gun or positive displacement (moyno or carousel) pump with a suitable plastering spray nozzle.

The second coat must be applied into a wet first coat, usually with 10 - 15 minutes, depending on temperature and relative humidity. The delayed application of the second coat could result in its de-bonding

Reinforcing Fabric ... When using **REINFORCING FABRIC HD** throughout the entire area, apply first a thin layer of **CEM-KOTE FLEX CR** by brushing or spraying. When spraying, brush each coat to eliminate all "pinholes." Embed **REINFORCING FABRIC HD** into the first coat and follow with the second coat. **REINFORCING FABRIC HD** must be fully covered. The total applied thickness of **CEM-KOTE FLEX CR**, including the **REINFORCING FABRIC HD**, should be 2 mm (80 mils).

In some new construction projects where **REINFORCING FABRIC HD** is considered to be used throughout, the fabric may be replaced with a 1 mm thick coat of **CEM-KOTE FLEX PLUS**. In such cases, only one coat of **CEM-KOTE FLEX CR** (1.0 mm thick) is needed on top of the **CEM-KOTE FLEX PLUS** layer. Please contact **GEMITE** or **W. R. MEADOWS** technical service for further information.

Curing ... Cure **CEM-KOTE FLEX CR** by air-drying for a minimum of three days prior to 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 to prevent "carbonation" of the material.

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

MASTERFORMAT NUMBER AND TITLE

07 16 13 – Polymer Modified Cement Waterproofing

LEED INFORMATION

May help contribute to LEED credits:

- IEQ Credit 3.1: Construction Indoor Air Quality Management Plan: During Construction
- MR Credit 2: Construction Waste Management
- MR Credit 5: Regional Materials

MAINTENANCE

Some maintenance may be required depending upon the type of chemical environment and the length of exposure.

WARRANTY

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

TECHNICAL SERVICE

For technical advice on suitability of **CEM-KOTE FLEX CR** for a specific application, specification assistance and application advice, contact Technical Service at 1-800-563-3618.

Short Specification

The surfacing will be **CEM-KOTE FLEX CR**, highly elastomeric, fibre reinforced and polymer modified cement manufactured by Gemite® Products Inc. (905-672-2020). It will be mixed and applied according to manufacturer's specifications and recommendations. The suitability of **CEM-KOTE FLEX CR** for each use and the surface preparation method must be checked with Technical Service before starting each project.

MANUFACTURER

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2014-12-08