



NO. 702



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CEM-KOTE™ CW PLUS

Capillary/Crystalline Waterproofing

AUGUST 2016
(Supersedes October 2015)



ANSI/NSF Standard 61
Drinking Water System
Components



DESCRIPTION

CEM-KOTE CW PLUS is a one-component (add water only), Portland cement based coating (slurry) containing silica-based materials. Under water pressure (negative or positive), the soluble silicate penetrates (due to osmotic pressure) into the substrate, where it reacts with lime and forms insoluble calcium silicate crystals which “plug” the capillary pores and waterproofs the concrete while allowing water vapor to pass.

USES

CEM-KOTE CW PLUS is a crystalline (capillary) in-depth waterproofing for new or existing water storage and water treatment concrete structures, digesters, clarifiers, and utility vaults. CEM-KOTE CW PLUS is suitable for waterproofing retaining walls, basements, concrete slabs, swimming pools, and other concrete structures.

FEATURES/BENEFITS

- Approved ANSI/NSF Standard 61- Barrier Materials.
- Negative- or positive-side waterproofing.
- Permanently active (in depth).
- Seals dynamic cracks up to 60 mils (1.5 mm). See Note 1.
- Fast cure waterproofing (48 hours).
- Approved for potable water tanks.
- Waterproofs highly porous concrete.
- Non-flammable.
- One component (add water only).
- More economical than competitive products.
- Inorganic & environment friendly.
- Long working time – 30 minutes plus.

Note 1: Providing application is done in accordance with current Gemite application instructions and guide specification.

PACKAGING

CEM-KOTE CW PLUS premix is a one-component material packaged in 50 lb. (22.7 kg) bags.

COLOR

Industrial Gray and Light Gray.

YIELD

CEM-KOTE CW PLUS premix yields 0.47 ft.³ (13.2 L) per unit. The theoretical coverage per coat is 1.25 – 1.4 lb./yd² (0.7 – 0.75 kg/m²). The rate of application varies depending upon the actual end use, as specified.

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 rate.

BEST USED BY

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

SPECIFICATIONS

- ANSI/NSF Standard 61 – Barrier Materials
- Potable Water Approved (Industrial Grey Color Only)

TECHNICAL DATA

Compressive Strength (ASTM C109 Modified)	54.7 – 59.7 MPa (7,930 – 8660 psi)
Modulus of Rupture (ASTM C348) 28 days	6.2 – 8.3 MPa (900 – 1,200 psi)
Bond Strength with Concrete (Pull off test)	Greater than the tensile strength of the concrete substrate
Water Vapor Permeance 3 mm (1/8”) thickness	1.8 metric perms
Hydraulic Permeability	Concrete block coated with CEM-KOTE CW PLUS withstands 500’ (156 m) water head pressure
VOC Content:	0 g/L

APPLICATION

Follow Gemite’s most recent application procedures and details to assure quality installation. The applicator must, prior to bid, confirm detailing, REINFORCING FABRIC use, and correct surface preparation and application procedures with Gemite's technical service.

CONTINUED ON REVERSE SIDE...

Surface Preparation ... Remove all deteriorated and loose concrete, form release agents, oil, grease, laitance, dust, dirt, and efflorescence by dry or wet sandblast, shot blast, or high-pressure water (minimum 5,000 psi [34.5 MPa] or 3,500 psi [24.1 MPa] with sand brought to the nozzle).

Active water leaks must be stopped using MEADOW-PLUG™ from W. R. MEADOWS. Deeper surface deterioration should be repaired with MEADOW-CRETE® GPS from W. R. MEADOWS. Leave the surface of MEADOW-CRETE GPS rough and wash thoroughly with high-pressure water before application of CEM-KOTE CW PLUS. CEM-KOTE CW PLUS should be applied within 48 hours after the surface repair.

Reinforcing Steel ... Remove all loose rust from any exposed reinforcing steel and apply two coats of FIBRE-PRIME.

Crack Treatment ... Any existing cracks must be treated separately using CEM-KOTE FLEX ST and REINFORCING FABRIC NW or REINFORCING FABRIC HD. In below-grade applications, use only REINFORCING FABRIC HD.

Mixing ... Mix one bag with approximately 1.1 - 1.4 gal. (4.1 – 5.3 L) of water, depending on required consistency, ambient temperature, and relative humidity. Use a drill (400 – 600 rpm) with a mixing paddle.

W. R. MEADOWS recommends the Collomix® MK 140 HF for mixing. Gradually add the dry material into water and mix until a smooth and lump-free mix is obtained. Do not over mix. Adjust the water for brushable consistency or a stiffer consistency for trowel application.

Application Method ... Apply a basecoat of CEM-KOTE CW PLUS in slurry consistency at a uniform rate of 1.25 – 1.4 lb./yd² (0.7 – 0.75 kg/m²) using appropriate compressed-air spray equipment, stiff masonry brush, or stiff broom. Apply the second coat of CEM-KOTE CW PLUS at a uniform rate of 1.25 – 1.4 lb./yd² (0.7 – 0.75 kg/m²) after basecoat has reached initial set but is still “green” (tacky).

When layers over 1/8” (3 mm) are required, apply a thin layer of CEM-KOTE CW PLUS first as a bonding agent by brush or broom. Apply second, stiffer consistency coat of CEM-KOTE CW PLUS into the wet slurry by trowel. Keep wet edge. Do not build up a layer thicker than 1/4” (6 mm). In new construction, CEM-KOTE CW PLUS is dry-sprinkle applied onto the surface of the freshly poured slabs (after the concrete starts to reach initial set) and is power-trowel finished.

Curing ... Moist cure CEM-KOTE CW PLUS for three days. Protect the surface from rapid drying. When working under tarps at freezing temperatures, avoid using propane heaters. Electrical heaters should be used to prevent carbonation of CEM-KOTE CW PLUS.

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

PRECAUTIONS

CEM-KOTE CW PLUS is a fast setting material. Under normal conditions, it should be applied within 15 - 30 minutes after mixing. Mix only the amount of material that can be applied within this period of time. Do not apply CEM-KOTE CW PLUS when the temperature is expected to be below 40° F (4° C) or when rain is imminent. The proper surface preparation is essential for successful bond of CEM-KOTE CW PLUS.

LEED INFORMATION

May help contribute to LEED credits:

- EA Credit 1: Optimize Energy Performance
- IEQ Credit 3.1: Construction Indoor Air Quality Management Plan: During Construction
- MR Credit 2: Construction Waste Management
- MR Credit 4: Recycled Content
- MR Credit 5: Regional Materials

CEM-KOTE CW PLUS is manufactured by:

Gemite® Products Inc.
1787 Drew Rd.
Mississauga, ON L5S 1J5
Canada

Tel. (888) 443-6483
Fax (888) 443-6329
Email techinfo@gemite.com
Web www.gemite.com

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

LIMITED WARRANTY

Gemite Products Inc. ("Gemite") warrants that, at the time and place we make shipment, our products are free from manufacturing defects and meet the technical properties on the current Technical Data Sheet. User determines suitability of product for intended use and assumes all risks.

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