

PRODUCT NAME

Corro-Chem™ 200

Acid Resistant Mortar/Concrete



MANUFACTURER

Gemite® Products Inc.

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FEATURES

- Resists to inorganic and organic acids
- Resists to caustic environments
- Not attacked by organic solvents
- Thin topping
- High abrasion and impact resistance
- Easily applied
- Vapor permeable (breathable)
- Resistant to high temperatures > 800°C
- Nonflammable & Nontoxic
- Bonds to wet surfaces

PRODUCT DESCRIPTION

Basic Use

Corro-Chem 200 exhibits an excellent acid resistance and good resistance to caustic environment. It is more economical than polymer based materials such epoxy, urethane and polyester resin mortars. It is primarily used for protection of concrete slabs exposed to acidic and caustic spills and in secondary containment structures. It is also used in the repair of concrete floors, loading docks exposed to acids. By extension of the mortar with 3/8 in (9 mm) pea gravel or 1/4 in (6 mm) crushed granite stone, it can be used as acid resistant concrete. For information to continuous acid exposure applications, please contact Gemite Products Inc. Technical service.

Composition and Materials

Corro-Chem 200 is an inorganic cement based mortar, especially formulated for resistance to acid environments. *Corro-Chem 200* is supplied as two component system consisting of dry powders packaged in a paper bag and the liquid component packaged in a plastic container.

Limitations

Do not apply *Corro-Chem 200* when the temperature is expected to be below 4°C (40°F) within 48 hours or when rain is imminent. Follow Hot Weather concreting precautions at temperatures exceeding 25°C (77°F) or under sunny and windy conditions.

Health and Safety

Corro-Chem 200 Component A is nonflammable. The component B is an alkaline water solution. Use rubber gloves when mixing and protective goggles. 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.

Colors

Dark Grey.

Packaging

Corro-Chem 200 Component A is packaged in 22.7 (50 lb) bags. The component B is packaged in plastic container, containing 2.26 L (0.6 USG).

Yield

The mix yields 11.9 L (0.42 ft³). When extended with 9 mm (3/8 in) pea gravel or 6 mm (1/4 in) stone the yield is 15.9 L (0.56 ft³).

Storage and Transportation

Corro-Chem 200, when stored on pallets in a dry, cool area has a shelf-life of 12 months. Packaged 55 bags per pallet.

TECHNICAL DATA

Tensile Strength in Bending	8.6 - 9.2 MPa (1,250 - 1,330 psi)
Modulus of Elasticity	16 - 22 GPa (2.3 - 3.2 x 10 ⁶ psi)
Compressive Strength (ASTM C109)	51.7 - 55.2 MPa (7,500 - 8,000 psi)
Water Vapor Permeability (ASTM E96)	0.28 - 0.5 perm-cm (0.17 - 0.30 perm-in)
Thermal Expansion & Contraction	10 x 10 ⁻⁶ /°C (6 x 10 ⁻⁶ /°F)
Direct Tension Bond Strength	1.0 - 1.5 MPa (140 - 220 psi)
Fire Testing (ULC 114)	non-combustible, 0-Flame, 0-Smoke

Chemical Resistance

The chemical resistance of *Corro-Chem 200* in acid environments is similar to conventional epoxy resins. It resists acid environments considerably better than normal concrete due to its physical and chemical composition. It also resists to sodium hydroxide concentrations up to 20% concentrations. For detail chemical resistance data, contact Gemite Products Inc. Unlike epoxy and other polymer based mortars, *Corro-Chem 200* can bond to water saturated, and chemically contaminated concrete surfaces. Because it is fully “breathable”, it will not debond due to entrapped moisture and capillary pressure at the concrete and

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3 & 7

03550 Concrete Topping
07570 Traffic Topping

Corro-Chem 200 interface. To evaluate the suitability of *Corro-Chem 200* for specific application, supply the following information to Technical Service.

Environment: type of chemicals, their concentrations, exposure temperature, pH value, frequency of chemical attack and length of time between washing.

Existing Concrete: type, compressive strength, degree of deterioration, surface treatment and type of traffic.

INSTALLATION

Current Guide Specification and Application Instructions contain information specific to each application and must be followed. Consult Gemite's Technical Service to ensure correct surface preparation, Application Procedures and chemical compatibility for your application.

Surface Preparation

Remove all loose, delaminated and oil & grease contaminated concrete. In the majority of applications, the removal of 3 - 12 mm (1/8 in - 1/2 in) of existing concrete is necessary, depending on deterioration, depth of contamination and specific application. Contact Gemite's Technical Service for instructions. Clean off all grease, laitance, dirt and efflorescence using shotblasting, sandblasting, high pressure waterblasting, min 34.5 MPa (5,000 psi) or 24 MPa (3,500 psi) with sand in the nozzle) or other approved methods.

Crack Treatment

Cut out "grooves" in cracks, approximately 4 cm (1 1/2 in) wide and 2.5 cm (1 in deep) with negative angle cuts and fill them with *Corro-Chem 200* mortar.

Mixing

Use 12 mm (1/2 in) electrical drill and a mixing paddle. For larger quantities use paddle or helix screw type mortar mixer. Place the liquid in the mixer and add powder into the liquid and mix until free of lumps for at least five (5) minutes. Convey mixed material to the point of placement in clean containers. The liquid is alkaline, the protective goggles and rubber gloves must be worn when mixing the material. When applied in thickness more than approximately 25 mm (1.0 in) extend the bag with 10.5 kg (23 lbs) of 9 mm (3/8 in) pea gravel or 6 mm (1/4 in) stone. Do not use calcite aggregates.

Water Saturation

Thoroughly saturate the slab. Remove all standing water to achieve a saturated surface dry condition.

Application

Apply *Corro-Chem 200* into to a uniform specified thickness. Minimum thickness is 10 mm (3/8 in). Keep wet edge. Use hand or mechanical screed to spread the material. Use magnesium float to finish. When the thickness exceeds 25 mm (1.0 in), or where large variations in thickness exist, contact Gemite's Technical Service.

Curing

Protect against fast surface evaporation. Air dry cure for 72 hours before exposing to chemicals. When working under tarps at freezing temperatures, use electrical heaters.

Clean Up

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

AVAILABILITY AND COST

Corro-Chem 200 is available worldwide. Contact the manufacturer for the name of the nearest Representative/Distributor 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 advice on suitability of *Corro-Chem 200* for specific application, specification assistance and application instructions, contact Technical Service: USA: 888-443-6483 or Canada: 905-672-2020.

Short Specification

The chemically resistant topping will be *Corro-Chem 200*, chemically activated cement mortar/concrete manufactured by Gemite Products Inc., [USA 888-443-6483] [Canada 905-672-2020]. It will meet all the Technical Data specified in the current *Corro-Chem 200* Product Data Sheet.