

PRODUCT NAME

Corro-Chem™ 200

Acid Resistant Mortar / Concrete



MANUFACTURER

Gemite® Products Inc.

Toll Free: 888-4-GEMITE (888-443-6483)
E-mail: techinfo@gemite.com
Web Site: www.gemite.com

USA	CANADA
160-3480 East Robinson Rd.	1787 Drew Road
Amherst, NY 14228	Mississauga, Ontario L5S 1J5
Phone 888-443-6483	Phone 905-672-2020
Fax 888-443-6329	Fax 905-672-6780

FEATURES

- Min. 3/8" (10 mm) - add aggregates for thicker layer
- Resistant to high temperatures > 800° C (1500° F)
- Resistant to high thermal shock
- Resistant to Inorganic & Organic acids
- Resistant to combined Caustic & Acid environments
- Not attacked by Organic solvents
- High Abrasion & Impact Resistant
- One-Coat system - NO primer or elastomeric membrane
- Vapor permeable (breathable)
- Nonflammable & Nontoxic
- Bonds to wet surfaces
- Bonds to Chemically contaminated surfaces
- Less Expensive than complicated Polymer systems

PRODUCT DESCRIPTION

Basic Use

Corro-Chem 200 has an excellent resistance to acid, and good resistance to caustic environment. It is used for protection of concrete slabs exposed to acidic and caustic spills and in secondary containment structures, and to repair concrete floors and loading docks exposed to acids. To use as acid resistant concrete, 3/8" (9 mm) pea gravel or 1/4" (6 mm) crushed granite stone is added (see Application). Contact Technical service for advice on continuous exposure to acid.

Most applications require only one coat.

Corro-Chem 200 is less expensive than polymer based mortars (epoxy, urethane & polyester resin).

Composition and Materials

Corro-Chem 200 is an inorganic mortar resistant to combined acid & caustic environments. *Corro-Chem 200* is supplied as 2-component kit, consisting of dry Comp. A + Liquid Comp. B.

Limitations

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

Refer to Chemical Resistance section for resistance details.

Health and Safety

Liquid Component B is an alkaline water solution. Use rubber gloves & protective goggles when mixing. Must avoid contact with eyes & 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 current SDS for health effects, precautions and first aid directions, before using *Corro-Chem 200*.

Color

Dark Gray.

Packaging

Dry Comp. A - 22.7 kg (50 lbs.) packaged in heavy-duty bags. Liquid Comp. B - 2.26 L (0.6 USG) is packaged in plastic jugs. Packaged 40 kits (Comp. A + B) per pallet.

Yield

Each Kit yields 11.9 L (0.42 ft³). In Horizontal applications, when extended with 19 lbs (9 kg) of 3/8" (9 mm) pea gravel or 1/4" (6 mm) crushed granite stone, it yields 15.6 L (0.55 ft³).

Storage and Transportation

Corro-Chem 200 when stored on pallets in a dry cool area has 12-months shelf-life. Liquid Comp. B must be declared as DG.

TECHNICAL DATA

Tensile Strength in Bending	4.6 - 5.8 MPa (670 - 840 psi)
Modulus of Elasticity	16 - 22 GPa (2.3 - 3.2 x 10 ⁶ psi)
Compressive Strength (ASTM C109)	24.1 - 31 MPa (3,500 - 4,500 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)	Noncombustible, 0-Flame, 0-Smoke

Chemical Resistance

Corro-Chem 200 resistance in acid environments is similar to conventional epoxy resins. It also resists to sodium hydroxide concentrations up to 20% concentration.

Corro-Chem 200 bonds well to water saturated and chemically contaminated concrete surfaces, which is an advantage over polymer based mortars. Being fully "breathable" it will not debond due to entrapped moisture and capillary pressure at the concrete and *Corro-Chem 200* interface.

It is not resistant to acid fluorides or hydrofluoric acid.

To evaluate suitability of *Corro-Chem 200* for specific project, supply the following information to Technical Service:

Environment - List of chemicals, their concentrations, exposure temperature, pH value, frequency of chemical attack and length of time between cleanup.

Existing Concrete - Type of structure, concrete compressive strength, degree of deterioration and contamination, any surface treatment & description of use.

INSTALLATION

Current Guide Specification & Application Instructions contain information specific to each application and must be followed. Consult Technical Service to ensure correct surface preparation, application procedures and cure requirements.

Surface Preparation

For most applications removal of 3-12 mm (1/8"-1/2") of existing concrete is necessary, depending on deterioration, depth of contamination and specific application. Remove all delaminated, loose and contaminated concrete, grease, laitance, dirt and efflorescence using shotblast, sandblast, or high-pressure waterblast 24-35 MPa (3,500-5,000 psi) with sand injection at nozzle.

Contact Technical Service for detailed surface preparation procedures or to review alternative surface preparation methods.

Crack Treatment

Route cracks, approximately 4 cm (1 1/2") wide and 2.5 cm (1") deep, and fill with *Corro-Chem 200* mortar.

Mixing

Use 12 mm (1/2") drill with suitable mixing paddle. For larger quantities, use paddle or helix screw type mortar mixer. Place liquid Comp. B in the mixer and mix, while adding dry Comp. A into the liquid. Mix a minimum of five (5) minutes, until homogeneous & free of lumps. If "splitting" the kit is necessary, shake the liquid Comp. B before using. Convey mixed material to the point of placement in clean containers.

For horizontal applications 12-25 mm (1/2"-1") thick, each Kit must be extended with 10.5 kg (23 lbs) of 6 mm (1/4") crushed granite stone. For thicker layers, over 25 mm (1"), use 9 mm (3/8") clean pea gravel, or 12 mm (1/2") stone. To evaluate suitability of *Corro-Chem 200* for specific project, supply the following information to Technical Service:

Application

Do not apply when the temperatures are expected to fall below 4°C (40°F) within 48 hours, or when rain is imminent. Follow hot weather concreting precautions when temperatures exceed 25°C (77°F), or under sunny and windy conditions.

Apply to a uniform specified thickness. Keep a wet edge. Apply by hand, or use screed to spread the material. Use steel trowel to finish horizontal & vertical surfaces. If thickness requirement exceeds 40 mm (1.5"), or when large variations in thickness are expected. contact Technical Service.

Construction (cold) joints, and control & expansion joints must be sealed. Contact Technical Service for further information.

Min. Thickness is 10 mm (3/8") for Horizontal or Vertical use.

Curing

Protect against fast surface evaporation. Air dry cure for 72 hours prior to opening to traffic. When working under tarps at freezing temperatures, requiring heating, avoid using propane heaters.

Clean Up

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

Shelf Life and Storage

Corro-Chem 200, when properly stored on pallets in a dry, cool area, has a shelf life of 12 months. Liquid Comp. B must NOT freeze.

AVAILABILITY AND COST

Corro-Chem 200 is available worldwide. Contact the manufacturer for the name of the nearest Representative/Distributor for pricing information.

MAINTENANCE

None required.

WARRANTY

A limited twelve (12) month Material Replacement Warranty is available.

TECHNICAL SERVICE

For specification assistance, or suitability of *Corro-Chem 200* for specific applications, and application instructions, contact Technical Service USA 888-443-6483 / Canada: 905-672-2020.

Short Specification

Acid resistant [coating] [topping] will be *Corro-Chem 200*, an inorganic mortar manufactured by Gemite Products Inc., [USA 888-443-6483] [Canada 905- 672-2020].

The performance data shown on the current *Corro-Chem 200* Technical Data Sheet establishes project basis-of-design.