



CHEM-BOND 2

Epoxy Bonding Agent for New – Old Concrete

PRODUCT DESCRIPTION

CHEM-BOND 2 is a two component, 100% solids structural epoxy adhesive for bonding new concrete to old concrete where curing in saturated moisture conditions is required.

FIELDS OF APPLICATION

- As structural bonding of new concrete or hydraulic mortar to old concrete.
- On-situ concrete extensions and modifications to existing structure.
- Jointless bonding of construction joint in sewage systems, canals, gullies, reservoir basins, and irrigation systems.
- Closing of shrinkage joints in ceilings, floors, decks, ramps, walls, retaining walls, and concrete pavements.
- Structural bonding of cement toppings and screeds.
- Repairs and sealing of various types of concrete cracks which are dormant without any movements, filling cavities, voids, honeycombs, etc.

PRODUCT FEATURES

- Ready-to-use work packs ensure correct mixing.
- Excellent bonding properties of new concrete to old concrete.
- Takes up and transfers tensile and compressive loads.
- High resistance to water and alkalis.
- Correctly designed pot life permits efficient progress.
- Easy application by brush, roller or spray.
- Solvent-free, no fire hazard.

PACKAGING

Product	Packaging
CHEM-BOND 2	2 Gallon (7.57 Liters) Unit Part A: 1 Gal Can, Part B: 1 Gal Can
	10 Gallon (37.58 Liters) Unit Part A: 5 Gal Pail, Part B: 5 Gal Pail

TECHNICAL DATA

Technical Data for Unmixed Parts

Property @ 25°C (77°F)	Resin Part A	Hardener Part B	Test Method
Solids	100 %	100 %	-
Color*	Clear	Grey	-
Density, Lb/Gal (Kg/L)	< 9.66 (1.16)	< 12.0 (1.44)	ASTM D1475
Mixing Ratio A : B	1 : 1 By Volume		-
Shelf Life	2 years	2 years	-

Technical Data for Mixed Parts

Property (Mixed A & B)	Value @ 25°C (77°C)	Test Method
Mixed Density, Lb/Gal (kg/L)	10.8 (1.30)	ASTM D1475
Mixed Color	Light Grey	-
Gel Time @ 60 grams, minute	55	ASTM D2471
Pot Life @ 1 Gal (3.785 Liter), minute	20	-
Shore Hardness @ 3 Days, D	78	ASTM D2240
Compressive Strength @ 7 Days, Psi (MPa)	10580 (72)	ASTM D695
Bond Strength (Old to Old Concrete) *, Psi (MPa)	2219 (15.3) Concrete Failure	ASTM C882
Bond Strength (Old to New Concrete) *, Psi (MPa)	1405 (9.7) Concrete Failure	ASTM C882
Water Absorption 24 hrs, %	0.041	ASTM D570
Final Cure, day	7	-

*Old Concrete: > 28 days.

APPLICATION DATA

Limitations: application at ambient temperature below approximately 41°F (5°C) is not recommended. Exposure to temperatures exceeding 149°F (65°C) for prolonged periods is not recommended.

Coverage: when applied as a bonding agent, spread at a rate of 175 ft² per Gallon (4.30 m² per Liter). This coverage is equivalent to 0.553 Lb per yard² (0.30 Kg per m²).

Surface Preparation:

Pre-treatment of Substrate: surface should be clean and sound. The surface must be free of any dust, oil, grease, laitance, curing compounds, or any other contaminants. It may be dry, damp, or wet, but must be free of standing water. The very best results are obtained on dry concrete. Do NOT apply on surfaces, which have been sealed with a permanent type of form oil, curing compound or release agent. Remove these substances before application. The surface temperature must be 41°F (5°C) and rising.

Acid Etching: on new concrete surfaces, remove laitance and un-bonded cement particles by acid etching. Dampen the surface with tap water. Use Chem-Crete's CONCLEAN CCC070 or diluted Muriatic acid to a 10% solution. Always add the acid to the water. Scrub the acid water solution onto the surface at the rate of 50 ft² / Gal (1.22 m² / liter). Allow the solution to sit for 20 minutes or until the acid bubbling stops. Scrub and flush thoroughly with clean water until all traces of acidity are washed-off from the surfaces. Remove water by squeegee, vacuum or broom and allow the surface to air dry. Other methods may be adopted if the acid etching method is not feasible, such as shot blasting, sand blasting or mechanical grinding.

Mixing: stir each component separately. Mix 1 part A and 1 part B by volume into a clean mixing container. Mix the epoxy with a

slow speed hand drill fitted with a mixing paddle attachment. Carefully scrape the sides and bottom of the mixing pail during mixing. Blend for 3 minutes until achieving a uniform color and consistency. Mixed epoxy must be processed within the pot life. Mixed epoxy will cure much faster in hot weather. Large batches of mixed epoxy will cure much faster than small batches. When preparing epoxy mortar, mix in 3 to 4 parts of aggregate by volume to one volume of CHEM-BOND 2 mixture.

Concrete Curing: observe standard curing practice for the newly placed concrete or hydraulic mortars.

CLEANING

Remove uncured CHEM-BOND 2 from tools and equipment with suitable solvents such as Xylene, Toluene or CHEM-CRETE BLENDED SOLVENT immediately after use. Cured material may only be removed mechanically.

STORAGE

The product can be stored for minimum of twelve months at temperature from 41°F to 95°F (5°C to 35°C) in the unopened original packaging. Protect from direct sunlight.

SAFETY PRECAUTIONS

After hardening thoroughly, CHEM-BOND 2 is physiologically harmless. Keep the resin and hardener away from the eyes mouth and skin. Do not breathe in the vapors. The uncured mixture can cause irritation of the skin. For best protection, wear rubber or plastic gloves. In case of contamination, wipe away resin or hardener immediately from the skin using paper towels and then wash with soap and water or hand cleaning detergent.

Empty resin and hardener cans must be disposed according to local city code or regulations. Under no circumstances empty cans should be used to store food or drink even if they have been thoroughly cleaned. Follow all cautionary direction as printed on container's labels.

TECHNICAL ASSISTANCE

Please contact International Chem-Crete Corporation for Technical Personnel.

WARRANTY

LIMITED WARRANTY: International Chem-Crete Inc. warrants that, at the time and place we make shipment, our materials will be of good quality and will conform to our published specifications in force on the date of acceptance of the order.

DISCLAIMER: The information contained herein is included for illustrative purposes only and, to the best of our knowledge, is accurate and reliable. International Chem-Crete Inc. is not under any circumstances liable to connection with the use of information. As International Chem-Crete Inc. has no control over the use to which others may put its products, it is recommended that the products be tested to determine the suitability for specific applications and/or our information is valid in particular circumstances. Responsibility remains with the architect or engineer, contractor and owner of the design, application and proper installation of each product. Specifier and user shall determine the suitability of the product for specific application and assume all responsibility in connection therewith. AM260311

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