



CEM230

Fast Setting Underwater Cementitious Repairs

PRODUCT DESCRIPTION

CEM230 is a fast setting, ready to use, cement-based concrete and masonry patching compound formulated specifically for underwater use.

FIELDS OF APPLICATION

CEM230 is used underwater or below grade on vertical, overhead and horizontal surfaces without forming.

It is used for the patching, repair, restoration and cosmetic reconstruction of dams, piers, reservoirs, pilings, seawalls, tunnels, sewer pipes and other underwater surfaces.

PRODUCT FEATURES

- Easily mixed by simple addition of water on site.
- Achieves initial set in 3-5 minutes and final set within 20 minutes even underwater.
- After initial set, CEM230 may be shaped to conform to the contours of the surrounding surface.
- Properly mixed and applied, CEM230 develops a very high strength and a tenacious bond.

PACKAGING

Product	Packaging
CEM230	50 Lb (22.7 kg) Bag

TECHNICAL DATA

Mixed Density: 15.3 Lb/gal (1.840 kg/L)

Coverage: 50 Lb bag CEM230 mixed mortar will yield approximately 3.3 gallons (12.50 Liters).

Compressive Strength*: ASTM C-109

1 days, Psi (MPa)	2650 (18)
7 days, Psi (MPa)	3090 (21)
28 days, Psi (MPa)	3570 (24.3)

Flexural Strength*: ASTM C-348

1 day, Psi (MPa)	560 (3.8)
7 days, Psi (MPa)	630 (4.3)
28 days, Psi (MPa)	780 (5.3)

Setting Time*: ASTM C-191 at 75°F (25°C)

Initial set	10 minutes
Final set	15 minutes

Percentage of chlorides: ASTM D-1411

Chlorides	0.01 % or less
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* Average

APPLICATION DATA

Surface Preparation:

Surfaces must be structurally sound, clean and free of loose or deteriorated concrete, rust, marine growth, oily materials and other contaminants.

Undercut edges of the area to be patched to a minimum depth of 3/4 inch (19 mm).

Clean exposed steel and reinforcing.

When substrate is not absorptive, abrade as necessary to ensure proper bonding. Surface must be damp to achieve proper bond.

Mixing: CEM230 will require approximately 1.27 Gal (4.8 liters) of potable water per 50 lb (22.7 kg) bag to achieve the proper mix consistency.

Pour the measured amount of water into a clean container. Add the measured amount of CEM230 and thoroughly mix for no more than 60 seconds to a stiff, no slump, putty-like consistency.

Mix small quantities of CEM230 in a clean pail with a hand trowel. Use a rotary mixer with rubber tip blades for mixing large quantities.

Mixing Procedure:

- Start mixer.
- Load water.
- Load the CEM 230.
- Mix for no more than 60 seconds.

Application:

To ensure complete bond with entire surface, force the CEM230 firmly into the pre-dampened area by hand or with a trowel. Underwater applications may be smoothed or finished by hand.

For out-of-water application, slightly overfill the patch and following initial set, shave the material to conform to the contour of the surrounding surface.

Always shave CEM230 toward the common bonding edge between the patching material and the existing surface.

Cure the material using standard curing practices.

Precautions:

- Mix material for no more than 60 seconds.
- Use only potable water with CEM230.
- Mix to a stiff, putty-like consistency.
- Do not re-temper or add sand to CEM230.

- Do not overwork or over trowel patching material.
- Do not featheredge CEM230.
- Clean mixing equipment between batches

CLEANING

Clean application tools and mixing equipment with water immediately following use.

STORAGE

Store CEM230 in cool dry storage facilities. Do not expose to direct sunlight. The shelf life of CEM230 is minimum 1 year if stored in a cool dry place in its original unopened container.

SAFETY PRECAUTIONS

CEM230 is non-flammable and non-toxic in nature. Avoid contact with eyes and skin as it may cause irritation due to its alkaline nature. Splashes of CEM230 should be washed off immediately with clean water. Wear necessary gloves and dust mask.

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.

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