



CEM 230

Cementitious Fast Setting Underwater Repairs

PRODUCT DESCRIPTION

CEM 230 is a fast setting, ready to use, cement-based concrete and masonry patching compound formulated specifically for underwater use.

FIELDS OF APPLICATION

CEM 230 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, **CEM 230** may be shaped to conform to the contours of the surrounding surface.
- * Properly mixed and applied, **CEM 230** develops a very high strength and a tenacious bond.

PACKAGING

Product	Packaging
CEM 230	50 lb/bag 22.7 kg/bag

TECHNICAL DATA

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

Coverage:

50 lb bag **CEM 230** mixed mortar will yield approximately 3.3 gal.

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 77°F (25 °C)

Initial set	10 minutes
Final set	15 minutes

ASTM D-1411

Chlorides	0.01 % or less
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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:

CEM 230 will require approximately 1.27 gal (4.8 liters) of potable water per 50 lb bag to achieve the proper mix consistency.

Pour the measured amount of water into a clean container. Add the measured amount of **CEM 230** and thoroughly mix for no more than 60 seconds to a stiff, no slump, putty-like consistency.

Mix small quantities of **CEM 230** 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 **CEM 230** 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 **CEM 230** toward the common bonding edge between the patching material and the existing surface.

Cure the material using standard curing practices.

CLEANING

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

CAUTIONS

- * Mix material for no more than 60 seconds.
- * Use only potable water with **CEM 230**.

- * Mix to a stiff, putty-like consistency.
- * Do not re-temper or add sand to **CEM 230**.
- * Do not overwork or over trowel patching material.
- * Do not featheredge **CEM 230**.
- * Clean mixing equipment between batches.

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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Distributed by

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