



CEM 220

Polymer Modified Cementitious Repair Mortar

PRODUCT DESCRIPTION

CEM 220 is a one-component polymer modified cementitious repair mortar consisting of polymers, aggregates and additives suitable for exterior and interior surfaces. **CEM 220** provides a high build concrete repair for vertical, horizontal and overhead applications.

FIELDS OF APPLICATION

CEM 220 mortar is designed for the durable repairs and re-profiling of in-situ and pre-cast concrete in civil engineering structures such as:

- * Facades, columns and beams
- * Bridges, towers and tunnels
- * Parking ramps, overpasses and pass throughs

CEM 220 can be used for filling cavities, repairs to spalled concrete, repairs to edges and re-aligning of walls prior to tiling and renovating existing commercial and residential structures to correct uneven structural irregularities. Excellent for re-profiling swimming pool walls prior to tiling, repairs to cold joints and repairs in water tanks and reservoirs. It can also be applied at reduced thickness and can be modified to meet tolerances at stairwells and elevators.

CEM 220 prevents damages from mechanical impact and abrasion, environmental and freeze-thaw deterioration and chemical destruction from acids, caustic solutions and other chemical contaminants.

PRODUCT FEATURES

- * Suitable for interior and exterior applications.
- * Thixotropic and non-sag permits use on vertical and overhead applications.
- * Non-shrink with lifetime bonding qualities.
- * Ready-to-use requires addition of water only.
- * Excellent workability.
- * Non-toxic, can be used in potable water tanks.

PACKAGING

Product
CEM 220

Packaging
50 lb/bag
(22.7kg/bag)

TECHNICAL DATA

Product as Supplied:

Cement Grey powder requires only addition of water.

Pot Life at 77°F (25°C):	35 minutes
Adhesion Strength* ASTM D4541- Method A	(concrete Failure)

* With SBR Primer (7days curing):

Compressive Strength: ASTM C-109 at 77°F (25°C)

1 day Psi (MPa)	(2200) 15
7 days Psi (MPa)	(6170) 42
28 days Psi (MPa)	(7940) 54

Flexural Strength: ASTM C-348 at 25°C

1 day Psi (MPa)	600 (4.1)
7 days Psi (MPa)	1160 (7.9)
28 days Psi (MPa)	1540 (10.5)

Setting Time: ASTM C-191 at 25°C.

Initial	200 Minutes
Final	240 Minutes

Chloride Content (BS 1881 124 – 83): <0.01%

Mixed Density: 17.5 lb/gal (2.10 kg/L)

- * Technical data is based on water ratio of 1.08 gal (4.1 liter) per bag.

Coverage:

55lb bag covers approx. 9 ft² area at 0.5 inch thickness (1m² at 12mm thickness).

APPLICATION DATA

Limitations:

Surface and application temperature should be more than 40 °F (5°C). Apply only to thoroughly clean, sound substrate.

Surface should be saturated. After placing, protect from direct heat and sun. Use mechanical mixer to avoid lumps. Avoid application in rain or contaminated surface. Do not add cement, sand or accelerator.

Surface Preparation:

All surfaces to receive **CEM 220** must be clean and free from all dust, paint, sealers, curing compounds or any other anti adherents. Chip-open the loose concrete until reaching sound base. Avoid featheredges by cutting the edges to a straight cut. Clean the substrate. Substrates contaminated with grease, oil or dirt should be cleaned and treated with **CONCLEAN CCC060**.

Saturate the substrate with clean water prior to placement.

Mixing:

Mixing ratio: 1.08 gal (4.1 lt.) clean water to 50 lb (22.7 kg) **CEM 220**.

CEM 220 may be mixed either by hand or by mechanical mixer. In case of hand mixing do not mix quantities greater than 10 kg at one time.

For mechanical mixing, slow speed mini mixer (approx. 400 rpm) or drill fitted with paddle can be utilized.

Pour approx. $\frac{3}{4}$ of the measured water needed into the mixer then add **CEM 220** slowly while mixing. After 3-4 minutes add the remaining water and mix until the mortar has the required lump free consistency.

Priming: Apply one coat of **EB 550 SBR** to the area to be patched immediately prior to placing the **CEM 220** mortar.

Application: **CEM 220** mortar may be applied by trowel or spatula. Use the mixed mortar without delay. Firmly place **CEM 220** mortar into the damp primed area and form to a final configuration working from edge to eliminate air voids.

Thickness: Application thickness on overhead and vertical in one layer is approximately 0.8 inch (20 mm). A thickness of 2.5 inch (60-70 mm) can be achieved in multi-layer application.

For repairs that require multi-layer applications always ensure that the preceding layer is stable but not fully set before applying a final finish layer.

Curing:

Protect exposed surfaces from excessive heat and cold. Cover surfaces with wet burlap and keep damp for 24 hour at least immediately after initial set at the working temperature.

CLEANING

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

STORAGE

CEM 220 should be stored in original undamaged packs in cool and dry storage area.

The shelf life of **CEM 220** is one year. The material must not be allowed to freeze or placed in open sunlight.

SAFETY PRECAUTIONS

CEM 220 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 **CEM 220** 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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Distributed by

John Echols, Sales Agent, Southwestern Composite Structures, Inc.

Phone: 888-213-4433 / Fax: 972-484-2557

Email: John@Echols.com

www.withconcrete.com