Repair Mortar

Product Description: CMAX® Repair Mortar is a polymer modified and shrinkage compensated rapid setting, high strength repair material designed for vertical and overhead structural repairs to concrete and masonry surfaces.

Product Use: CMAX® Repair Mortar demonstrates low sag, making it ideal for vertical or overhead repairs. CMAX® Repair Mortar is also available with integral corrosion inhibitor in cases where maximum corrosion protection is desired. The addition of corrosion inhibitor has no adverse effect on the other physical properties of the product. This product can be built up to at least 1-1/2" (38mm) in one application. Its unique properties allow the user to actually sculpt the material during application. Use to repair concrete cracks, curbs, steps, pre-stressed panels, pipe, tunnels, sewers loading docks, silos, retaining walls, culverts catch basins, decorative moldings, bridge columns, parapet walls, septic tanks, cold storage vaults, virtually any vertical or overhead concrete surface

Size: 55 lb (25 kg) bags and 20 lb (9.1 Kg) pails.

Yield: Each 55 lb (25kg) bag of CMAX® Repair Mortar will yield approximately 0.50 cu ft (14 L) of material. CMAX® Repair Mortar can be extended with up to 27.5 (12.5 kg) of -3/8" (-9.5 mm) (or -1/2" (-12.7 mm)) clean maximum size aggregate per 55 lb bag for deep repairs.

Technical Data

Applicable Standards:

ASTM International

- ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens
- ASTM C157/C157M Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar and Concrete
- ASTM C191 Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
- ASTM C882 Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear
- ASTM C928 Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs

Physical/Chemical Properties: Typical test results for CMAX® Repair Mortar, when tested in accordance with applicable ASTM Test Methods, are shown in Table 1. Product exceeds the requirements of ASTM C928 Type R2 with reduced flow for vertical and overhead applications.

Setting time ASTM C191

Initial	Approx. 20 min.
Final	20-40 Min
Approx. water content/ 55 lb bag	10 pints (4.7 L)
Consistency	Gel-like
Unit Weight	128 lb/cu ft (2051kg/m3)

Compressive Strength: ASTM C109 Modified

3 hours	4000 psi (27.6 MPa)
24 hours	5000 psi (34.5 MPa)
7 Days	5500 psi (37.9 MPa)
28 Days	6500 psi (44.8 MPa)

Slant Shear, ASTM C882 Modified

24 hours	1000 psi (6.9 MPa)
7 days	1500 psi (10.3 MPa)
28 days	2500 psi (17.2 MPa)

Length Change, ASTM C157 (typical)

28 days, air	-0.1%
28 days, water	+0.1%

Installation

SURFACE PREPARATION:

- Remove all spalled areas, as well as areas of unsound concrete and previous patching materials.
- Holes should be chipped out to create a new sound substrate.
- If rusty reinforcing steel is present, it must be abrasive blasted to remove rust. Wear appropriate personal protective equipment. It will be best to remove enough material to completely expose the reinforcing steel.
- Large vertical or overhead patches deeper than 2" (51mm) should contain reinforcing steel. If none is present, new steel should be inserted using appropriate techniques.
- Holes should be dampened with clean water before patching. No puddles of water should be left in the hole.

MIXING:

- Wear impervious gloves, such as nitrile when handling product.
- Add approximately 10 pints (4.7 L) of water to the mixer for each 55 lb (25 kg) bag of CMAX® Repair Mortar being mixed.
- Add the product and mix for approximately 3 minutes. Adjust water as needed to achieve a stiff gel-like consistency.
- Where large quantities of material are used for patches deeper than 2" (51 mm), Repair Mortar may be extended up to 27.5 lb (12.5 kg) of -3/8" (-9.5 mm) (or -1/2") (-12.7mm) clean maximum size aggregate per 55 lb (25 kg) bag. This will require a small addition of water depending on the dampness of the aggregate.

APPLICATION:

CMAX® Repair Mortar should be trowel applied to the damp surface. Apply a thin layer with heavy trowel pressure, and then go back and build up to the desired thickness. CMAX® Repair Mortar obtains high bond strength without the use of bonding adhesives or acrylic additives. After initial set, the material may be trimmed and shaped to match the existing contours of the patching area.

CURING:

During the first 24 hours, it is best to keep the patch covered or damp to prevent excessive loss of water. Under hot, dry and windy placement conditions, all concrete tends to lose moisture unevenly and may develop plastic shrinkage cracks.

PRECAUTIONS:

- Do not apply when temperatures are below 40° F (4°C) or are expected to drop below 30°F (0°C) within 24 hours.
- In hot weather, use cool mixing water to lengthen setting time.
- Mix no more material than can be used in 15 minutes.
- Do not re-temper with additional water.

NOTICE OF LIMITED WARRANTY:

CC Products Incorporated warrants this product to be of merchantable quality when used or applied in accordance with the instructions herein. This product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of its product (as purchased) found to be defective, or at the shipping companies; option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to CC Products, Inc in writing. This limited warranty is issued and accepted in lieu of all other express warranties and expressly excludes liability for consequential damages.

CONTACT DETAILS:

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Refer to www.cmaxcement.com for the most current technical data, MSDS, and guide specifications. (Site Under Construction)
LEED Eligibility for Regional Materials (MR-c5) and Recycled Content (MR-c4)

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