

CARMELO

STRUCTURAL MORTAR MIX 4000 PSI

(Mezcla estructural 4000)

High Strength Mortar with Polymer



Product Description: STRUCTURAL MORTAR MIX 4000 PSI is a single component Portland cement-based plaster containing additives and reinforced with fiber for a superior bonding strength. Depending upon application, the product may be sprayed or hand-troweled and is less permeable, and easy to place and finish.

Advantages: Structural Mortar Mix has a high degree of adhesion, shear and compression strength which ensures correct bonding of patched areas with existing structures. The durability of structural reinforcements obtained with our mix is enhanced by the product's high levels of resistance to sulfate attack and chloride ingress. Our Structural Mortar Mix is also simple to use, requiring only the addition of water at the jobsite.

Industry Standards and Approvals: This product meets and exceeds the ASTM C-270 (Mortar for Unit Masonry), ASTM C-387 (Packaged Dry Mortars) Standards and ASTM C 109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars.

Usage and Application:

The structural mortar, built with our GCT, SCIP system, is designed for any work where a construction of high resistance to compression is required. It is also useful for repair work and the construction of houses using structural panel similar to GCT/M2 system.

Surface Preparation: The surface must be sound, clean, dry, and free from oil, wax, grease, dust, detergents, or other external contaminants that may prevent a strong bond.

Mixing Ratio:

- 1 Gal (3.78 L) of water per 50 lbs. (22.68 kg) bag

Machine Mixing Instructions:

- 1 The mixture is obtained by adding water into a clean container and then gradually adding the powder following the ratio provided.
- 2 If the mortar becomes too difficult to mix, add additional water until the desired consistency is achieved.
- 3 The mixing process can be performed in a cement mixer or in a bucket (working manually or with a pump-grade, sprayable mortar) or using

a continuous mixer until a homogeneous, lump-free mortar is obtained.

- 4 You can also use a plaster sprayer to mix and simultaneously pump the mortar, using a rotor/stator system suitable for the granulometric grading of the mixture.

Manual Mixing Instructions:

- 1 In a suitable mixing container add approximately the suggested ratio of water, then empty the Structural Mortar Mix bag into the container.
- 2 Work the mix with the necessary tools, and add additional water as needed until the desired consistency is achieved.
- 3 Make sure all the material is adequately wet before proceeding with the application.

Installation / Curing:

- 1 Structural Mortar Mix must be applied with a trowel or by spraying, with subsequent passes, until the required thickness has been obtained.
- 2 All cavities must be filled, the reinforcement rods must be carefully surrounded with the patching material. Make sure the mortar is compact, exercising adequate pressure during application.
- 3 Finish off the mortar as it begins to set, using the appropriate floating equipment (rigid float,

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sponge spreader, or smooth spreader).

- 4 Structural Mortar Mix must be applied after having moistened the substrate to saturation point.
- 5 Provide sufficient moisture to permit continuous hydration of the cementing materials and to minimize cracking.
- 6 The effectiveness of the curing procedure will depend on climate and job conditions.

Storage: Store mortar in a dry place with moderate temperature, making sure that it's protected against water or other external agents.

Protection of Work Area:

- Do not apply when temperature is forecast to be above 100°F (38°C) without taking the required hot weather precautions.

Environmental Considerations: The product is environmentally friendly due to it containing regional materials from Puerto Rico.

Warranty: Ecológica Carmelo warrants this product to be of merchantable quality when used or applied in accordance with the instructions herein. The product is not warranted as suitable for any purpose or use other than the purpose for which it is intended.

Health & Safety Precaution: This product contains Portland cement. Always use safety goggles and rubber gloves when using this product, since contact with freshly mixed cement can cause severe burns. Avoid direct contact with skin and eyes. If this product does come in contact with the eyes, immediately flush with water for at least 15 minutes. For skin exposure, wash promptly with plenty of soap and water. If needed, consult a physician. Prolonged exposure to dust could irritate or negatively impact eyes, skin or lungs. Eliminate exposure to dust by using the correct protective gear such as masks, goggles, and gloves.

Technical Data:

Yield or Coverage

A 50 lbs. bag will yield approximately 0.45 ft³ of mixed material. Coverage will be approximately 22 ft² at 1/4" thickness. Approximate Coverage per Thickness for a 50 lbs bag: 1/4" (6,3 mm) 20-22 sq. ft (1,9-2,0 m²)

Product Details

Product Code:	Physical State:	Size + Packaging:	Colors:
MORSTR4K	Powder	50 lbs bag	Gray, Beige

Compressive Strength ASTM C 109 at 28 days

4000 psi (27.6 MPa)

Bucket Life at 71°F / 20°C

45 minutes

Density

132 lbs/ft³

Shelf Life + Application Properties

Shelf Life	1 year in the original bag, in a dry covered place.
Initial Setting Time at 72°F / 22°C	2 hours
Final Setting Time at 72°F / 22°C	4 hours
ASTM 1583 (Pull Off Test)	100 psi

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