

COSTAR RM 40

High Quality Structural Concrete Crack Repair Mortar



PRODUCT DESCRIPTION

Costar RM 40 is a heavy duty; polymer modified structural patching concrete with high ultimate compressive strength and abrasion resistance. It is specially designed for use on vertical and horizontal concrete repair and reinstatement in large or small areas. Costar RM 40 ensure high strength gain and long-term durability and structural bonding owing to its low water requirement. Costar RM 40 designed performance characteristics features excellent compatibility with concrete up to a compressive strength greater than 30MPa. Costar RM 40 can be hand applied up to a thickness of 40mm and is not hazardous in nature.

BENEFITS

- Easy to prepare and quick to apply.
- Excellent workability
- Improves impermeability and chemical resistance.
- Improves compressive strength and durability
- Excellent high build properties
- Zero VOC content and freeze/thaw resistant
- Good adhesion to substrates, subfloors and stable adhesive residue.
- Excellent standard of finish can be achieved to allow direct application of coverings.
- Shrinkage compensated allows for long term dimensional stability.

USES

- It's widely used re-profiling and repairs on highway, fly-overs, car parks, concrete constructions on the sea etc.
- Patching and repairing damaged concrete.
- It can be used for concrete repairs in factory, car parks etc.

- It's suitable for above and below grade repairs.
- It's used as plaster on new type walling and panel system.
- For repairs to damaged industrial flooring.
- Ideal for restoration of honeycombed, spalled or otherwise damaged concrete
- It may be used for flatwork, in-situ or precast beams, columns and walls.
- It may be applied for mass or thin-set repairs.
- It can also be used for quick and fast patch repair of concrete and asphalt roads

APPLICATION

Surface Preparation

Ensure that the concrete surface to be repaired is sound and free from dirt, oil, laitance and any other deleterious substances, which reduces adhesion of material to the substrate. Weak, damaged and deteriorated concrete should be removed and edge of repair area should be recessed to a depth of 5mm to prevent feather edging. To ensure satisfactory bonding, the prepared surface should be dampened down to minimize suction. Ensure that the surface is in a saturated surface dry condition prior to application of Costar RM 40

Priming

All exposed reinforcement bars must be cleaned and treated with Costar anti-corrosion rebar primer. Absorbent surfaces should be dampened with clean water. Very absorbent surfaces must be primed with diluted Primer (Aqualatex C10). Non-absorbent surfaces must be primed as well. The primer should be used in accordance with the instructions printed on the Product Datasheet and must be allowed to dry before applying the repair mortar.

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Mixing

Costar RM 40 should be mixed in the proportions of 20kg of powder to 6 liters of water. Add Costar RM 40 powder to the required amount of water in a clean container and mix for at least 3-4 minutes until a homogenous, smooth, and even trowel-able plastic consistency is obtained. Mixing is best achieved using a drill fitted with a power whisk. Only mix enough mortar that can be applied before the product begins to set (approx. 10–15 minutes). Costar RM 40 can be applied up to a thickness of 10-100mm. For increased economy the mortar can be bulked out by adding up to an equal volume of graded aggregate.

TECHNICAL PROPERTIES

Packaging	20kg				
Appearance	Grey/white powder				
Shelf life	12 months from date of production				
Storage condition	Product must be stored in original, unopened, and undamaged sealed packaging in dry condition and temperature between +5 °C and +35 °C.				
Water ratio	4litres of water per 20kg bag of product				
Setting time	Initial: Approx. 20 minutes		Final: 20 to 40 minutes		ASTM C191
Compressive strength	3 hours (15.5 MPa)	24 hours (27.5 MPa)	7 days (38.7 MPa)	28 days (40.8 MPa)	ASTM C109 modified
Slant shear, modified	24 hours: (8.5 MPa)	7 days: (17.8 MPa)	28 days: (20.4 MPa)	ASTM C882	
Length change	28 days in air: ≥ -0.05%		28 days in water: ≤ 0.05%		ASTM C157
Application temp	Aminimum 10° C Maximum 30° C				
Density	2.0kg/l				
Open time	Approximately 100 minute@20°C and 45minute@35°C				
Coverage	Approximately 1.2 – 1.5 kg per m ² per 1 mm thickness. (Note: The figure above does not take in to account surface profile, porosity or material waste, thus variation in actual site results can be expected)				



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CURING

Protect the fresh mortar immediately from pre-mature drying for a minimum of 3 days using Costar range of Curing agent or other appropriate curing method.

STORAGE AND SHELF LIFE

Protect from freezing, if frozen or crystallized, thaw gradually and stir to homogenous mixture. Shelf life in unopened original containers is 12 months when stored at 70°F (21°C).

LIMITATIONS

Costar RM 40 should not be used when the temperature is below 50C and falling. Do not exceed the maximum recommended water content and only use clean potable water. If any doubts arise concerning temperature or substrate conditions, consult your local Costar Building Product office.

HEALTH & SAFETY

- Please ensure that hand gloves and goggles are worn during installation
- Apply in ventilated areas, away from flames
- It is only important that during application and after application, standard safety procedures are done.
- Please consult current MSDS for product.
- *For Professional Use only.*

LEGAL NOTE

The information and recommendations relating to the application of Costarchem products, are given in good faith based on current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with the stated recommendations in the product datasheets. Whilst Costarchem endeavors to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it. The user of the product must test the product's suitability for the intended application and purpose. Costarchem reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

STANDARD COMPLIANCE

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
- ASTM C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete

ADDITIONAL INFORMATION

Costarchem manufactures a complete range of construction chemical products which include:

- Concrete admixtures
- Waterproofing system
- Flooring system
- Cementitious and epoxy precision grouts
- Damp-proofing products
- Sealants and adhesives
- Repair and refurbishment systems

For more information on any of our products, please contact Costarchem global or regional office.

