

# MEGACRET-40 GEO

## High-strength, eco-friendly repairing geo-mortar

### Description

High-strength, eco-friendly, fiber-reinforced, fast-setting repairing geo-mortar, enriched with natural binders and minimum synthetic polymers. It provides:

- Superior strength.
- Very good bonding to the substrate.
- Excellent workability.
- Reduced water permeability.
- Volume stability.
- A very smooth finish. It is not necessary to apply another material (e.g. putty) in order to achieve a smooth result.
- Can be applied in thin (2 mm) or thicker layers (40 mm) per coat.
- Protection of the reinforcement against corrosion.

MEGACRET-40 GEO contains special additives that are able to penetrate deep into concrete and form a protective layer on the surface of the steel reinforcement. Moreover, they reduce the porosity of concrete and thus increase its water impermeability, preventing the penetration of substances that could potentially corrode the steel reinforcement.

It is classified as a PCC R4 mortar for concrete repairs, according to EN 1504-3.

### Fields of application

MEGACRET-40 GEO is suitable for highly demanding repairs in concrete element. It is applied with a trowel or pneumatically with a gunite process on floors, walls or ceilings.

### Technical data

Form:	powder
Color:	grey
Water demand:	4.8 – 5.0 l/25 kg bag
Bulk density of dry mortar:	1.40 ± 0.10 kg/l
Bulk density of fresh mortar:	2.00 ± 0.10 kg/l

Compressive strength:

- After 24 hours: > 20.00 N/mm<sup>2</sup>
- After 7 days: > 35.00 N/mm<sup>2</sup>
- After 28 days: > 45.00 N/mm<sup>2</sup>

Flexural strength:

- After 24 hours: > 5.00 N/mm<sup>2</sup>
- After 7 days: > 7.00 N/mm<sup>2</sup>
- After 28 days: > 8.00 N/mm<sup>2</sup>

Elastic modulus: >20.0 GPa

Chloride ion content: 0.00%

Adhesion: ≥ 2.00 N/mm<sup>2</sup>

Thermal compatibility  
Part 1 (50 freeze-thaw cycles):

≥ 2.00 N/mm<sup>2</sup>

Capillary water absorption: 0.35 kg·m<sup>-2</sup>·h<sup>-0.5</sup>

Reaction to fire: Euroclass A1

Pot life: 1 h at +20°C

Layer thickness

(1 layer): 2-40 mm

### Directions for use

#### 1. Substrate preparation

The substrate must be free of dust, grease or any foreign matter. Before applying MEGACRET-40 GEO, the substrate has to be thoroughly dampened and then the excess of water should either be evaporated or removed with compressed air.

#### 2. Application

A 25kg bag of MEGACRET-40 GEO is gradually added into 4.8-5.0 kg of water under continuous stirring, until a homogenous, tight mass is formed, appropriate for repair works. Either a low-speed mixer or a concrete mixer could be used for the mixing. The material should be applied (pressed) in the desired thickness - up to 4 cm per layer - with a trowel

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or pneumatically with a guniting process. When a second layer is required, the surface of the first layer should be roughened, to achieve better adhesion.

The final surface should be well protected from dehydration by being covered with wet cloths or polyethylene sheets, or repeatedly dampened for 48 hours.

## Consumption

Approx. 17 kg/m<sup>2</sup>/cm of layer thickness.

## Packaging

MEGACRET-40 GEO is available in 25 kg bags.

## Shelf-life - Storage

12 months from production date, stored in its original, unopened packaging, in places protected from moisture and frost.

## Remarks

- Application temperature must be between +5°C and +30°C.
- At low temperatures and in case early strength development is required, it is recommended to mix the material with lukewarm water.
- Not sulfate resistant. Avoid contact with sea water.
- The product contains cement that reacts with water forming alkaline solutions, thus is classified as irritant.
- Consult the directions for safe use and precautions written on the package.



2032

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EN 1504-3

Concrete repair product for structural repair PCC mortar (based on hydraulic cement, polymer modified)

DoP No.: MEGACRET-40 GEO/1269-01

Compressive strength: class R4

Chloride ion content: ≤ 0.05%

Adhesive Bond: ≥ 2.0 MPa

Carbonation resistance: Pass

Elastic modulus: ≥ 20 GPa

Thermal compatibility part 1: ≥ 2.0 MPa

Capillary absorption: ≤ 0.5 kg·m<sup>-2</sup>·h<sup>-0.5</sup>

Dangerous substances: comply with 5.4

Reaction to fire: Euroclass A1

## ISOMAT S.A.

BUILDING CHEMICALS AND MORTARS

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