Technical Datasheet

MEGACRET-40

High-strength, fiber-reinforced repairing cement mortar

Description

High-strength, fiber-reinforced cementitious patching mortar, enriched with polymers. It provides:

- Superior strength.
- Very good bonding to the substrate.
- Excellent workability.
- Reduced water permeability.
- Volume stability.

It is classified as a CC R4 mortar for concrete repairs, according to EN 1504-3. Certificate Nr. 2032-CPR-10.11.
MEGACRET-40 has received an Environmental Product Declaration (EPD) following an assessment of its life-cycle environmental impacts. Registration No: EPD-IES-0006172, The International EPD® System.

Fields of application

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

Technical data

Form:	cementitious powder
Color:	grey
Grain size:	up to 3 mm
Water demand:	4.60 l/25 kg bag
Bulk density of dry mortar:	1.40 ± 0.10 kg/l
Bulk density of fresh mortar:	2.10 ± 0.10 kg/l
Compressive strength:	
• After 24 hours:	> 20.00 N/mm^2
• After 7 days:	> 35.00 N/mm^2
• After 28 days:	> 50.00 N/mm^2
Flexural strength:	> 8.00 N/mm^2
Elastic modulus	21.70 GPa
Carbonation resistance	Pass
Chloride ion content:	0.00 %
Adhesion:	≥ 2.10 N/mm^2
Thermal compatibility Part 1 (50 freeze-thaw cycles):	≥ 2.00 N/mm^2
Capillary water absorption:	0.48˙kg˙m^{-2}˙h$^{-0.5}$
Reaction to fire:	Euroclass A1
Pot life:	2 h at +20^{0}C
Max. thickness/layer:	4 cm

Directions for use

1. Substrate preparation
The substrate must be free of dust, grease or any foreign matter. Before application, the substrate has to be thoroughly dampened.

2. Application
One 25 kg bag of MEGACRET-40 is gradually added into 4.60 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 or pneumatically with a gunite 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. 17.5 kg/m^2/cm of layer thickness.

Packaging

MEGACRET-40 is available in 25 kg paper bags and 5 kg plastic bags.

MEGACRET-40

Shelf-life - Storage

- Paper bags of 25 kg:
  12 months from production date.
- Plastic bags of 5 kg:
  18 months from production date.

The shelf-life mentioned above is valid, provided that the product is stored in original, unopened packaging, in places protected from moisture and frost.

Remarks

- Application temperature must be between +5^{0}C and +30^{0}C.
- At low temperatures and in case early strength development is required, it is recommended to mix the material with lukewarm 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.

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2032-CPR-10.11

EN 1504-3

Concrete repair product for structural repair CC mortar (based on hydraulic cement)

DoP No.: MEGACRET-40/1207-03

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^{-2}·h$^{-0.5}$

Dangerous substances: comply with 5.4

Reaction to fire: Euroclass A1

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