

EP-240



Three-component, epoxy resin-based flowable grout mortar

Description

Three-component, epoxy resin-based, solvent-free casting grout mortar composed of a specially graded aggregate blend with a semi-flowable consistency and high mechanical strength.

It is specially formulated to withstand both static and dynamic loads in heavy-duty and structural support applications..

Advantages

- Solvent-free.
- Non-shrink.
- Does not require primer.
- Resistant to heavy traffic loads.
- Resistant to freeze-thaw cycles.
- High early strength.
- High adhesion, compressive strength and abrasion resistance.
- Excellent chemical resistance.
- Provides excellent adhesion to substrates such as concrete, steel, wood and stone.
- Waterproof.

Areas of Use

- Repairing and filling wide cracks and voids.
- Repair of reinforced concrete structural components.
- Anchoring and fixing of machinery and press foundations and heavy machine bases.
- Fixing steel columns to foundations.
- Floor repair and leveling applications.
- Anchoring applications in precast structures.
- Fixing of reinforcing bars, injection anchors and filling applications on horizontal surfaces.
- Repair of rigid joints and bridge bearings.
- Surface preparation of bridge bearing plates and girder supports prior to installation.
- Repair and filling works prior to epoxy and polyurethane floor coatings.
- Repair of underground structures and marine structures such as ports, piers and breakwaters.
- High-performance anchoring applications.
- Reprofiling and waterproofing of pile heads.
- Grouting under heavy crane rails or support rails and in vibration-prone industrial applicatio

Surface Preparation

- The application surface must be sound, clean, dust-free and free of oil and grease. Concrete, cement-based substrates and plasters must be dry and must have completed their curing period.
- Any standing water on the application surface must be removed.
- On surfaces requiring priming, priming should be carried out with Hammerfast EP-112 epoxy primer or with a primer prepared using max. 10% of the A and B components of Hammerfast EP-240.
- The concrete to be treated must have a minimum compressive strength of 225 kg/cm², must have completed its 28-day curing period and should contain a maximum moisture content of 4% at the end of this period.
- On substrates with high moisture content, priming should be carried out using Hammerfast N-200 moisture-tolerant epoxy primer.
- For application on steel surfaces, sandblasting should be performed until bright metal is obtained, or the surface should be cleaned with a wire brush. Rust on reinforcement bars must be removed and new reinforcement should be installed if necessary.
- On epoxy surfaces, the surface must be roughened and cleaned by sanding.

Application

Packages must be mixed without dividing the components and without altering the mixing ratios. Component B is added to Component A and mixed for 3–4 minutes until a homogeneous mixture is obtained. Then Component C is added and mixing continues for an additional 3–5 minutes until a homogeneous mortar is achieved.

Immediately after mixing, the mortar should be poured from one side into the prepared area, directing the flow toward the shortest distance, and properly placed using a trowel. The pouring process must start from the lowest point and continue continuously until the entire area is completely filled. An air vent should be left at the highest point to allow trapped air to escape.

In formwork casting applications, the mortar should be poured continuously from only one side of the formwork, and proper settlement of the material should be ensured using a hook-ended steel wire. Formwork should not be removed before 24 hours, and leveling shims should not be removed before 2 days. After the machine is put into operation, the bolts must be checked.

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For rebar anchoring applications, the holes to be drilled must be at least 10 mm larger than the diameter of the reinforcing bar. The drilled holes must be cleaned with air or a brush so that no dust remains inside. The holes should be filled with the prepared Hammerfast EP-240, and the reinforcing bars should be inserted by rotating them into the holes. The mortar should slightly overflow from the hole; the excess material should be removed and the surrounding area of the rebar should be properly finished.

Consumption

Approx. 2.10 kg/m² per 1 mm thickness.

Points to Consider

- Do not apply on wet, frozen surfaces or substrates with a moisture content above 4%.
- After application, the surface must be protected from external effects such as heat, dry conditions and strong wind for at least 24 hours.
- Necessary precautions must be taken in areas where water or water vapor pressure from the negative side is observed.
- Product sets are supplied ready for use. Do not add thinners or similar materials during use or mixing.
- Components must not be mixed manually; mixing should be carried out using a mechanical mixer.
- During application, the ambient, substrate and material temperatures must be within the specified limit values.
- The open time of the adhesive may vary depending on the ambient temperature.
- Especially in hot environments, only the amount that can be used immediately should be mixed. After mixing, the material should not be kept in the mixing container; it should be transferred to a container with a larger surface area or directly to the application area.

Storage and Shelf Life

When stored in its original, unopened packaging, in dry and moisture-free conditions, protected from direct sunlight and frost, and kept at temperatures between +10 °C and +30 °C, the shelf life of Components A, B and C is 12 months from the date of production. If the product is not fully used, the packaging must be tightly closed after use. Pallets must not be stacked on top of each other.

Technical Properties

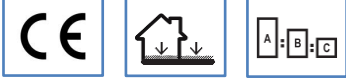
Reference Standard	TS EN 1504-3 / R4 Class
Color and Appearance	A: Transparent liquid
Mixing Ratio	B: Yellowish liquid
Chemical Structure	C: Sand beige
Pot Life	A+B+C: Sand beige
Workability Time	30-40 min.
Time to Traffic	24 hours
Full Curing Time	7 days
Max. Aggregate Size	2 mm
Application Thickness	5 mm - 60 mm
Application Temperature	+5 °C / +35 °C
Service Temperature	- 15 °C / +80 °C
Hardness (Shore) – ASTM D 2204	D60-70
Density	A: 1,12 g/cm ³ B: 1,00 g/cm ³ C: 1,70 g/cm ³ (Dust density) A+B+C: 2,10 g/cm ³
Flexural Strength – TS EN 12190	1 days= 10 N/mm ² 7 days = 30 N/mm ²
Compressive Strength – TS EN 12190	1 days = 40 N/mm ² 7 days = 80 N/mm ²
Adhesion Strength – EN 1542, EN 12188	Concrete: > 3.0 N/mm ² (Concrete failure) Steel: ~10 N/mm ²
Fire Classification – EN 13501-1	E _{FL}
HS Code	3907.30.00.00.00

Note: Values are given at 23 ± 2 °C temperature and 50 ± 5% relative humidity.

Packaging

- Component A: 1 kg liquid
- Component B: 2 kg liquid
- Component C: 21 kg powder
- A+B+C: 24 kg set

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Safety Precautions

- Keep out of reach of children.
- Do not eat or swallow.
- Keep away from foodstuffs.
- Do not inhale directly and avoid contact with the body.
- May cause allergic reactions.
- In case of eye contact, rinse immediately with plenty of water and seek medical advice.
- It is recommended to use gloves, safety goggles and protective clothing during application.
- Wash hands thoroughly with plenty of water after use.
- For detailed safety information, refer to the Material Safety Data Sheet (MSDS).

Tool Cleaning

Clean equipment immediately after application with epoxy thinner or a suitable cleaner. Hardened material must be removed mechanically.

Quality certificates

- CE
- ISO 9001
- ISO 14001

