

EP-145



Epoxy-based, two-component, solvent-free repair and bonding mortar

Description

Hammerfast EP-145 is a two-component, epoxy resin-based product with a thixotropic structure, moisture tolerance, and high adhesion and mechanical strength, used for bonding, filling, and repair purposes.

Advantages

- Solvent-free,
- Non-shrinking,
- Does not require primer,
- Excellent adhesion to concrete and steel,
- High adhesion, compressive strength, and abrasion resistance,
- High chemical resistance,
- Does not flow or sag,
- Provides adhesion on damp surfaces,
- Waterproof,
- Can be used as both an adhesive and a filler
- Easy to apply.

Areas of Use

- Bonding of alumina ceramics,
- Bonding of wear plates,
- Bonding of refractory ceramic linings,
- Bonding of wear- and impact-resistant composite plates,
- Bonding of Remalox ceramics,
- Bonding of ceramic bricks,
- Rebar anchoring into concrete,
- Repair and waterproofing of cracks,
- Installation and bonding of all types of metal and steel components to concrete and steel structural elements,
- Bonding of expansion joint tapes,
- Fixing of packers,
- Fixing of guardrails and seismic dampers,
- Fixing of anchoring elements.

Surface Preparation

If the application surface is concrete, it must have completed at least 28 days of curing. The surface to be treated should be cleaned of dust, oil, and construction residues, and any damaged or loose concrete particles on the surface must be removed. Steel surfaces must be free of rust. Rust on reinforcement bars should be removed, and new reinforcement should be added if necessary. Any water leakage or ponding on the surface must be eliminated before application.

Mixing Procedure

Component A is mixed for 1 minute using a low-speed mixer (300–400 rpm). The entire content of Component B is then added to Component A (scraping the sides and corners thoroughly) and mixed for an additional 3 minutes. During mixing, the mixer should be held upright and close to the surface to avoid air entrapment, and over-mixing should be avoided.

Higher ambient temperatures reduce the pot life of the mixture, while lower temperatures extend the pot life. If an epoxy mortar is required, quartz sand is added immediately to the mixture at an approximate 1:10 resin-to-sand ratio and mixed again until a homogeneous mixture is obtained.

Application

The entire content of the black-colored Component B must be poured into the cream-colored Component A, and the mixture should be prepared using an electric mixer at approximately 300 rpm fitted with a spiral paddle. The material must be mixed for at least three minutes to obtain a homogeneous mixture. Once the mixture is homogeneous, it will turn gray in color.

Hammerfast EP-145 can be applied to the prepared surface using a spatula, trowel, or notched trowel.

Consumption

As adhesive mortar: 4-5 kg/m²

Consumption table for use in equipment:

Rebar Diameter (mm)	Hole Diameter (mm)	Hole Depth (mm)	Required Material (ml)	Number of Dowels That Can Be Installed (pcs)
10	14	140	11,6	32
12	16	160	15,3	24
14	18	180	20	19
16	20	200	25	15
18	22	220	30,5	12
20	24	240	37	10
22	26	260	43,2	9
24	28	280	50,4	8
26	30	300	58,2	7
28	32	320	71,5	5

EP-145



Epoxy-based, two-component, solvent-free repair and bonding mortar

Important Notes

- The product sets are ready for use; no thinner or solvent-type materials should be added during use or mixing.
- Components must not be mixed by hand; mixing should be carried out using a mechanical mixer.
- During application, the ambient, substrate, and material temperatures must be within the specified limit values.
- In low-temperature and high-humidity environments, the curing time of the adhesive increases, whereas in high-temperature and low-humidity environments, the curing time decreases.
- The open time and curing time of the adhesive may vary depending on the ambient temperature.

Safety Precautions

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

Storage and Shelf Life

When stored in its original, unopened packaging in a dry, moisture-free environment, protected from direct sunlight and frost, and at temperatures between +10 °C and +30 °C, the shelf life of Components A and B is 12 months from the production date. If not used, the packaging must be tightly sealed. Pallets must not be stacked.

Packaging

Component A = 3,75 kg
Component B = 1,25 kg

Technical Properties

Color	A = Cream / B = Black / A+B = Gray
Chemical structure	Epoxy resin
Mixing ratio (A:B)	3:1 (by weight)
Density (A+B)	1,80±0,1 kg/L
Solid content	% 100 (by volume)
Pot life (250 g)	15-20 min.
Working time	45 min.
Time to open to traffic	24 hours
Full curing time	7 days
Application thickness	Max. 30 mm
Application temperature	+5 °C / +30 °C
Material temperature	+15 °C / +30 °C
Compressive strength (EN 196-1)	1 days= ~ 40 N/mm ² 7 days= ~70 N/mm ²
Flexural strength (EN 196-1)	1 days= ~ 25 N/mm ² 7 days= ~ 35 N/mm ²
Adhesion strength (EN 1542)	7 days= > 3,5 N/mm ² (on concrete) 7 days= > 15 N/mm ² (on steel)
Tensile strength	15-20 N/mm ² (7 days)
Abrasion resistance (EN 13892-4)	10 µm
Fire classification (EN 13501-1)	E _{FL}

Note: The values are given for a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5%.

Cleaning of Tools

Clean the equipment immediately after application using epoxy thinner or a suitable cleaner. Cured material must be removed mechanically.

Quality Certificates

- CE
- ISO 9001
- ISO 14001

