



## Jointing mortar – epoxy bound

### PRODUCT DESCRIPTION

#### Usage / Properties:

##### Jointing mortar EP is:

- a solvent free, ready formulated and pre-mixed jointing mortar based on an epoxy resin and a special filler

##### Jointing mortar EP is suitable for:

- for jointing old and new nature and concrete-stone plaster like terraces, garden paths, walking paths etc. with light traffic load

##### Special properties of Jointing mortar EP:

- quick curing
- joints reach a high strength and can keep up with mechanical loads from cleaning machines
- excellent water-compatibility
- good water permeability, so that rainwater is fed to the groundwater via the joint (dependent on the substrate)
- barrier against green growth from below

#### Colour / delivery unit / Shelf life

Colour:	sand, grey, basalt
Delivery unit:	25 kg; further container sizes on request
Shelf life:	12 months after production date
	Dry, cool and free of frost in original containers

### TECHNICAL DATA

Density at 23°C / 50 % rel. hum. of air	approx. 1,45 g/cm <sup>3</sup>
Compressive strength EN 196-1	approx. 18 – 20 N/mm <sup>2</sup>
Elastic strength EN 196-1	approx. 8 – 10 N/mm <sup>2</sup>
Solid contents	100 %
Viscosity (25°C, V03.1, V03.4)	Component A: earth-moist
	Component B: 400 – 600 mPas

Mixing ratio:	100 : 2,5 (by weight)
Chemical resistance	When completely cured resistant against: Water, sea and wastewater, a number of brines, diluted acids, saline solutions, mineral oils, lubricants, fuels, and a number of solvents (with some materials a change in colour is possible). We advise to carry out suitability tests in advance.
Slurry mixture	max. 10 minutes (30°C) max. 15 minutes (20°C) max. 20 minutes (10°C)
Editable (consistency of moist earth)	approx. 12 – 16 minutes (30 °C) approx. 46 – 20 minutes (20 °C) approx. 24 – 36 minutes (10 °C)
Walkable (at 50% rel. hum. of air)	12 – 16 hours (30°C) 16 – 20 hours (20°C) 24 – 36 hours (10°C)
Curing (complete mechanical stress at 50% rel. hum. of air))	3 days (30 °C) 7 days (20 °C) 10 days (10 °C)

## Processing:

### Substrate:

Minimum requirements for the joint: depth: 30 mm and width: 8 mm.

A stable, load bearing, constantly water permeable substrate is required. (Please observe the current standards and guidelines) as settlements, stresses and displacements in the subsoil can later damage the joints. Subsequent loads must not cause any settling of the surface or loosen stones.

For areas with higher traffic load, the stone should lay  $\frac{3}{4}$  of its height in a rugged mortar.

On newly laid surfaces, the depth of the joint has to be checked.

For coverings with a bevel, the filling of the joint should only be carried out to the lower edge of the bevel.

Already existing joint-fillers are to be removed using water or air pressure.

The entire surface is to be cleaned thoroughly. Dirt will otherwise be fixed into position with the mortar.

The area must be well and permanently pre-wetted so that the binder cannot penetrate the surface of the stone.

Dependent on the absorbency of the stones which are to be jointed, pre-wetting must be carried out several times during the application process. The amount is dependent on the stone structure, temperature, and sunlight.

### Tools:

Rubber slider, broom, water hose, mixer

**Mixing:**

Pour the resin/sand-mixture into another vessel and add the hardener component. Mix intensively with a slow rotating stirrer (recommendation: double stirrer with shafts that rotate in opposite directions) for at least 2 – 3 minutes.

Add approx. 10% water to improve the processing consistency. Mix again for 3 – 5 minutes. Before applying, a creamy and processable mass should be achieved.

**Application:**

The product is poured onto the prepared surface and quickly spread with a rubber slider.

After a temperature-dependent waiting time, the joint-filler has an earth-moist consistency. At this point, the mortar residues on the stones are completely swept away. Attention needs to be paid, that the mortar residues are not swept into joints which are still to be grouted.

The binder film remaining on the stone surface can be removed easily with a soft water jet before sweeping. When doing so, make sure to not rinse out the fresh joint.

**After application:**

24 hours after application, the surface should not be touched. In the 7 days after application, the fresh joints should not be mechanically loaded.

The fresh joint is to be protected against heavy rain within 24 of application.

When using a foil for protection against water, the foil needs to be a minimum of 35 cm away from the surface of the joint.

A strength test of the surface should be carried out before proper usage.

High humidity and rain as well as low temperatures can significantly extend the setting time.

**General:**

Material, air and substrate temperatures must be measured and must be between 10 °C and 30 °C during the whole application.

Furthermore, care must be considered that the substrate temperature is always 3 °C above the dew point temperature.

Relative humidity of air may not exceed 80 %. If possible, it should not rain in the first couple of hours after application.

Jointing mortar EP is not suitable for a strong bond between the stones and cannot absorb subsidence of the substrate.

In case of insufficient watering during application, a binder film may remain on the stone surface. Dependent on the intensity, this film disappears over time due to the effects of weather and walking or driving on the stone.

Practice has shown that there are also isolated types of stone where the binder of the grout can cause colour deepening. These phenomena result from the contact between the mortar mixture and the absorption capacity of the stone surface.

For this reason, with highly absorbent types of stone, it may be necessary to pre-water several times. Capillarity, which is influenced by the size of the pores and their distribution in the stone, can also contribute to stronger and longer-lasting colour depressions on the surface, which can also be irreversible.

In case of doubt, it is advisable to create a test surface. In the course of this, the exact consumption per m<sup>2</sup> can also be determined. Please make sure that the selected type of stone is cleaned thoroughly (according to the manufacturer's instructions).

When exposed to UV radiation, a certain change in colour and shade or chalking must be expected with epoxy resins. For this reason, we recommend using muted colours.

## **FURTHER INFORMATION / SAFETY INFORMATION:**

For safe handling of epoxy resins and their curing agents we do recommend attention to the following leaflets as a matter of principle:

Leaflet BG-Regel BGR 227, Handling of Epoxy resins. (Ed.: Berufsgenossenschaft der Chemischen Industrie).

Furthermore, the relevant physical, safety-related, toxicological, and ecological data have to be taken from the specific material safety data sheets.

Guidelines / regulations:

It is imperative to ensure that the substructure of the paving is suitable for the requirements. For this purpose, the current standards and guidelines, e.g. ZTV-Wegebau, must be taken into account.

Disposal:

Disposal in consultation with a specialist disposal company, considering the current safety data sheets.

GISCODE: RE 30

Data base:

The determination of all the data and application information is based in laboratory tests. Measured values in practice may differ because of influences beyond our control.

Legal foundation:

The following specifications as well as the recommendations for handling and use of our products are based upon our knowledge and experience under normal conditions, at proper storing and application. Because of different materials, substrates and working conditions other than given normal values, a warranty of a working result or a liability – for whatever legal relationship - cannot be justified from these instructions or a verbal guidance respectively, unless intent or gross fault can be imputed to us. Here, the user must prove that he had transferred in written form, in time and completely every knowledge that is necessary for an appropriate and promising estimation. The user is obliged to test the products on their suitability for the intended purpose. Incidentally, our respective terms and conditions of business are valid. You get these on [www.gremmler.de](http://www.gremmler.de). Only the newest edition of this technical data sheet is valid.

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