

EPOXY RESIN GROUT

EH196R EPOXY RESIN GROUT

TEST CERTIFICATES AND SUPPORTING DOCUMENTS

- › Product acc. to EN 13813 "Synthetic resin screed"
- › Company certification acc. to DIN EN ISO 9001:2015

PROPERTIES

- › 2-component reaction resin grout based on epoxy resin with fast reaction kinetics
- › For applications at lower temperatures and smaller volumes, where a fast working progress is required
- › Very good flow behaviour
- › After a few hours already loadable
- › Filler pre-mixed with resin and deaerated in a vacuum
- › Good adhesion to steel surfaces, thereby frictional connection
- › Does not require a bonding layer under normal substrate conditions and is directly poured onto the prepared concrete surface or rust-free steel surface
- › Very high compressive and shear strengths
- › High static and dynamic load capacity
- › Vibration-reducing
- › Impermeable to water
- › Resistant to alkaline solutions, weak acids and mineral oils
- › Resistant up to a service temperature of 60 °C at wet load or 80 °C at dry load
- › High resistance to temperature changes

SYSTEM COMPONENTS

EH1/EH115 Primer
EH196R Epoxy resin grout

AREAS OF APPLICATION

- › Grouting
 - In case of low layer thicknesses
 - Of rail and ribbed plates
 - Of galvanised steel components and non-iron-metals
 - Of precision bearings
 - Of bearing supports for high racks
 - Of pumps, compactors and compressors in the chemical industry
 - Of noise protection wall posts and bearing plates in the road and bridge construction sector - Between steel plates
 - Of measuring sensors in concrete carriageways
- › Fillings of scratches and shrinkage cavities of concrete substrates for the subsequent reaction resin coatings

TECHNICAL DATA

TYPE		EH196R	
Grain size		mm	0-0.5
Layer thickness		mm	6-100
Mixing ratio		Resin : Hardener	10 : 1
Consumption approx.		kg/(m ² · mm)	2.0
Density (23 °C/50 % rel. air humidity)		kg/m ³	1,800
Measure of extension		cm	≥ 30
Flow channel		cm	≥ 60
Processing time approx.	5 °C	min	40
	20 °C	min	20
	30 °C	min	10
Minimum processing temperature at the substrate		°C	10
Compressive strength*	4 h	N/mm ²	≥ 50
	8 h	N/mm ²	≥ 80
	1 d	N/mm ²	≥ 90
	7 d	N/mm ²	≥ 100
	28 d	N/mm ²	≥ 100
Bending tensile strength*	4 h	N/mm ²	≥ 15
	8 h	N/mm ²	≥ 25
	1 d	N/mm ²	≥ 30
	7 d	N/mm ²	≥ 40
	28 d	N/mm ²	≥ 40
Adhesive pull strength	7 d	N/mm ²	≥ 1.5
Modulus of elasticity (static)	7 d	N/mm ²	≥ 13,000

* Testing of bending tensile and compressive strength in accordance with DIN EN 196-1

Storage: 12 months. Cool, dry, free from frost. Unopened in its original container.

Packaging: 2-K packaging (Base resin with filler + hardener) 15 kg hobbock

Hazard class: Observe safety data sheet.

PROCESSING

SUBSTRATE PREPARATION:

Substrates must be dry, clean and protected against rising moisture.

Remove loose and unsound materials such as cement slurry, impurities etc. with suitable methods (e.g. shot-blasting with solid blasting abrasives, shot peening or chamber blasting or similar) until the grain structure has been exposed. A sufficient average surface tensile strength (generally $\geq 1.5 \text{ N/mm}^2$, KEW $\geq 1.0 \text{ N/mm}^2$) must be ensured.

MIXING:

The components resin and filler (component A) and hardener (component B) are supplied in a predetermined mixing ratio (except for drum products). Use only complete bundles. Component B (hardener) must be added completely to component A (resin + filler). Mix thoroughly with a mechanical agitator (max. 300 rpm). The mixing time must at least be 5 minutes. Do not introduce any air into the mixture. Pour the mixture into a clean vessel and thoroughly stir again until a streak-free mass is obtained.

PROCESSING / CASTING:

Grouting in larger volumes can lead to material shrinkage and/or cracking due to reaction temperatures. Therefore, dimensions and grouting volume of **EH196R** must be limited as follows:

- › The maximum grouting **height is 100 mm**, the maximum grouting volume is 200 l. or 400 kg.
- › The **aspect ratio** of grouting fields should be **max. 1:3**.
- › When grouting **rail systems**, the **grouting sections** must not exceed a **maximum length of 3 m** while the max. permissible grouting height must be observed.

If greater grouting heights are required, an application in layers is necessary. All layers except the final layer must be covered with kiln-dried quartz sand with a grain size of 0.3/0.9 mm while the epoxy grout is still fresh to ensure an adhesion of the subsequent grouting layer. All loose quartz sand must be removed before adding the next layer.

The **surface temperature** of the latest layer must have cooled down to **$\leq 35^\circ\text{C}$** before the next layer can be applied. Further grouting must be continued within the next 24 h to ensure a chemical bonding of the individual grouting layers.

In general, a bonding layer is not required, however with difficult and highly absorbent concrete substrates a priming with the **EH1** is recommended. Please refer to the latest technical data sheet.

Pour the **EH196R** without interruption into the prepared formwork, coated with a release agent.

The pouring must be carried out from one side or corner only, without interruption.

Temperature range, substrate humidity:

+10 °C to +30 °C (component, air and material temperature)

The substrate temperature must be at least **3 °C** above the current dew point temperature.

The relative humidity must not exceed **80 % RH**.

The **EH196R** can be used on substrates up to a maximum residual moisture of **$\leq 4 \text{ wt. \% CM}$** .

CURING:

When processing reaction resins (e.g. epoxy resins), both the ambient temperatures and the substrate temperatures are of particular importance.

At low temperatures, the chemical reactions are generally delayed, so that the product cures slower. This extends the times for processing, recoating, walkability and curing. At the same time, the higher viscosity increases the consumption and worsens the deaeration behaviour.

At higher temperatures, the chemical reactions are accelerated so that the product cures faster. This also shortens the times for processing, recoating, walkability and curing.

For a complete curing of the reaction resin, the average component and ambient temperature must be above the specified minimum and at least **3 °C** above the present dew point temperature for the entire curing time.

For outdoor applications, protect the material from moisture for a sufficient time after application. If the material is exposed to moisture prematurely (e.g. due to condensation), a white discolouration and/or tackiness may appear on the surface. This may considerably impair the bonding properties to subsequent coatings and must therefore be removed, if necessary, e.g. by sandblasting.

CLEANING:

Clean equipment and tools immediately after use and in case of longer interruptions with **EH** Cleaner.

PHYSIOLOGICAL BEHAVIOUR, PROTECTIVE MEASURES, LABELLING AND DISPOSAL:

The product is only approved for professional use. Refer to the DGUV regulation 113-012 "Tätigkeiten mit Epoxidharzen" (Activities with epoxy resins) and to the latest safety data sheet. The plastic material is harmless after curing. Read and observe the safety information on the container before processing.

Wash any contamination off the skin using plenty of water and soap. When not cured, do not allow to escape into drains, water or soil. Absorb any spilled material immediately, e.g. using sawdust. Dispose of the containers as specified under the current waste and waste disposal regulations.

Notes

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