

PRODUCT DATA SHEET

Sika® Repair®-EP

2-component, epoxy repair, filling, sealing and forming mortar

PRODUCT DESCRIPTION

Sika® Repair-EP is a thixotropic, two-component, repair, filling, sealing and forming mortar, based on a combination of epoxy resins with refined quartz fillers.

USES

As a repair mortar for a variety of applications:

- Repair mortar for concrete, cement mortar and stone.
- Filling holes and damaged corners, edges and joint sides in concrete.
- Rigid interpretation of broad, non-moving joints.
- Filling and sealing of cracks (static / no movement).
- Excellent for manufacturing / forming skirting, coving or sanitary baseboards for floor / wall connections.

CHARACTERISTICS / ADVANTAGES

- Fast cure.
- Suitable for dry and damp concrete surfaces.
- Non-shrink curing.
- Curing is not hindered by high humidity.
- Excellent adhesion to concrete.
- High mechanical resistance.
- Resistant to impact and abrasion.
- Thixotropic, non-sagging.
- Vertical and overhead applications possible.
- Different coloured components (for mixing control).

APPROVALS / STANDARDS

Class R3 according to EN 1504-3.

- Principle 3 (concrete repair) - Method 3.1.
- Principle 4 (structural reinforcement) - Method 4.4.
- Principle 7 (maintenance or restoration of passivity) - Method 7.2.

PRODUCT INFORMATION

Chemical Base	Epoxy resin
Packaging	5 kg tub
Shelf Life	12 months
Storage Conditions	Store properly in undamaged original sealed packaging, in a dry environment, at temperatures of between + 5 ° C and + 30 ° C.
Appearance / Colour	Grey mortar
Density	2.0 kg/l (component A+B mixed).

TECHNICAL INFORMATION

Compressive Strength	~77 N/mm ²	(EN 12190)
Modulus of Elasticity in Compression	~15 kN/mm ²	(EN 13412)

Tensile Strength	2.4 - 3.6 N/mm ²	
Tensile adhesion strength	4.4 N/mm ²	(EN 1542)
Coefficient of Thermal Expansion	32.5 µm/(m.°C)	(EN 1770)
Thermal Compatibility	3.9 N/mm ²	(EN 13687-1)
Capillary Absorption	≤ 0.03 kg.m-2.h-0.5	(EN 13057)

APPLICATION INFORMATION

Mixing Ratio	Component A : Component B = 97.12 : 2.88 (parts by weight).		
Consumption	2 kg/m ² per mm layer thickness.		
Layer Thickness	Horizontal: 60mm maximum. Vertical: 25mm maximum. Overhead: 10mm maximum.		
Product Temperature	Minimum +5°C, Maximum +30°C.		
Ambient Air Temperature	Minimum +5°C, Maximum +30°C.		
Dew Point	Beware of condensation! The ambient temperature during application must be at least 3°C higher than the dew point.		
Substrate Temperature	Minimum +5°C, Maximum +30°C.		
Pot Life	Approximately 90 minutes at +20°C. The pot life starts when the resin and hardener are added, then mixed. It is shorter at high temperatures and longer at low temperatures. With a larger compact amount of mixed material, processing time will be shortened. In order to lengthen the application time at high temperatures, the amount to be mixed can be part mixed in line with the ratio and by weight. Another method is to cool components A + B before mixing (not below +5°C).		
Waiting Time / Overcoating	Temperature	Cured	Fully Polymerized
	+5°C	~36 hours	21 days
	+20°C	~12 hours	14 days
	+30°C	~6 hours	6 days
	Note: Times are approximate and will be affected by changes in ambient temperatures and environmental conditions.		

VALUE BASE

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The substrate must be sound and sufficiently compressive (minimum 25 N/mm²) with a minimum tensile strength of 1.5 N/mm². The substrate must be dry (≤ 3% moisture), clean and free from contamination, ice, grease, oil, old surface treatments or coating layers. Delaminated, weak, damaged and deteriorated concrete, and where necessary sound concrete, shall be removed by suitable mechanical or very high pressure waterblasting techniques. Concrete must be at least 4 weeks old. Steel reinforcement should be free from rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion. Surfaces shall be prepared using abrasive blast cleaning or high pressure waterblasting techniques to a minimum standard of SA 2

(ISO 8501-1).

MIXING

Pour the entire amount of hardener (component B with black colour) with the binder (component A). Mix component A and component B for at least 3 minutes with a slow rotation (< 400 rpm) mixing device with mixing head, until a smooth, homogeneous material in an even grey colour is achieved. Mix only an amount of Sika® Repair-EP that can be applied within the processing time.

APPLICATION

On the prepared concrete surface, apply Sikafloor®-151 (0.35 kg/m²) as a bonding bridge. Apply the Sika® Repair-EP mortar with a trowel to the still wet primer layer (primer must not be dry).

For overhead applications, apply in a layer of up to 10 mm. After curing, a subsequent layer can be applied. Applications on vertical surfaces in layers of maximum 25 mm can be achieved without formwork. Minimum layer thickness: 1.5 mm.

For large thicknesses or sharp corners, we recommend using formwork.

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Thinner C immediately after use. Hardened material can only be mechanically removed.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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Product Data Sheet

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