

PRODUCT DATA SHEET

Sika® Injection-458

Epoxy high strength rigid structural injection resin with an extended pot life

DESCRIPTION

Sika® Injection-458 is a 2-part epoxy, low viscosity, high strength structural injection resin. It has an extended pot life and bonds to most dry and damp structural components to form a barrier against water infiltration and corrosive substances.

USES

Sika® Injection-458 may only be used by experienced professionals.

- Sealing cracks in dry and damp building components that are not under hydrostatic pressure
- Where increased structural strength is required particularly on civil engineering structures e.g. bridges, tunnels and shafts etc.
- Suitable for injection repairs to bond and fill voids between concrete blinding, floor slabs and screeds
- Preventing ingress of water and infiltration of reinforcement corrosion promoting substances
- Injection by simple 1-component pumps

CHARACTERISTICS / ADVANTAGES

- Very low viscosity
- Good adhesion, including at its edge / perimeter
- Good adhesion to concrete, masonry, stone, and other mineral substrates
- Suitable for dry and damp conditions
- Long / extended pot life even when used at higher temperatures
- When hardened creates a barrier against water infiltration and corrosive substances
- Penetrates cracks from 0.2 mm in width
- Injection by simple 1-component pumps

APPROVALS / CERTIFICATES

CE Marking and Declaration of Performance to EN 1504-5 - Concrete injection

PRODUCT INFORMATION

Composition	Epoxy resin		
Packaging	Part A (Resin)	10 kg	
	Part B (Hardener)	4 kg	
	Refer to current price list for packaging variations.		
Shelf life	12 months shelf life from date of production if stored properly in undamaged, unopened, original sealed packaging.		
Storage conditions	Dry storage at temperatures from +8 °C up to +25 °C. Protect from direct sunlight and humidity.		
Colour	Part A (Resin)	yellow - transparent	
	Part B (Hardener)	brown	
Density	Part A (Resin)	~1.10 kg/l	(EN ISO 2811)
	Part B (Hardener)	~0.94 kg/l	
	at +20 °C		
Viscosity	Temperature	Viscosity	(ISO 3219)
	+23 °C	~360 mPa s	
	+30 °C	~215 mPa s	

TECHNICAL INFORMATION

Shore D Hardness	~70	(EN 868)
Compressive strength	~48 N/mm ²	(ISO 604)
Tensile strength in flexure	~55 N/mm ²	(ISO 178)
Tensile strength	~18 N/mm ²	(ISO 527-1)

APPLICATION INFORMATION

Mixing ratio	2 : 1 parts by volume (refer to Application Instructions/Mixing)		
Ambient air temperature	+12 °C min. / +35 °C max.		
Substrate temperature	+12 °C min. / +35 °C max.		
Pot Life	Temperature	Pot Life	(acc. to ISO 9514)
	+12 °C	~120 min	
	+23 °C	~90 min	
	+30 °C	~55 min	
Curing time	Temperature	Fully Cured	(EN ISO 9514)
	+12 °C	~3 days	
	+30 °C	~1 day	

BASIS OF PRODUCT DATA

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.

FURTHER INFORMATION

Application must only be carried out by Sika® trained and /or approved contractors, experienced in this type of application.

IMPORTANT CONSIDERATIONS

- Do not add solvent to the product.
- At lower temperatures pot life will be longer but the product will become more difficult to inject and take longer to harden.
- Trials must be carried out to establish suitability of resin, spacing of injection ports, injection equipment and pressures.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

- Substrate must be clean and sound.
- Cracks may be dry or damp.
- Remove from cracks by suitable preparation techniques (compressed air), dust, loosely adhering particles and other contaminants that will affect injection and adhesion.

MIXING

Sika® Injection-458 is supplied in containers pre-batched according to the required mixing ratio of 2 : 1 by volume.

Sika® Injection-458 is always applied with 1-component injection pumps

- Add both parts in the correct proportion into a suitable clean, dry container.
- Mix with an electric mixer at slow speed (max. 300 rpm) for at least 3 minutes until a consistent mix is obtained.
- Avoid entraining air.
- Make sure the material on the container walls and base is mixed in thoroughly. Use a spatula as a scraper or pour again into another clean container and remix. Mix only the quantity that can be used within its pot life.

APPLICATION METHOD / TOOLS

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

Preliminary trials must be carried out by a competent experienced applicator using suitable equipment such as Injection pumps for single component products (Sika® Injection Pump) and appropriate injection pressures.

CLEANING OF EQUIPMENT

Clean all tools and application equipment using the Sika® Injection Cleaning System according to the Product Data Sheet. Hardened/cured material can only be removed from external surfaces mechanically.

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

Sika® Injection-458
April 2022, Version 02.01
020707030010000023

SikaInjection-458-en-TH-(04-2022)-2-1.pdf