

PRODUCT DATA SHEET

Sika® Icosit® KC 450/30

Two-component, high-performance, fast-curing, self-levelling polyurethane joint filler

PRODUCT DESCRIPTION

Sika® Icosit® KC 450/30 is an elastic two-part, fast-curing, polyurethane polymer resin joint filler that can be applied by hand or machine. It is used for flexible filling of joints between rails and the surface of the road. It adheres to all sides of the space to be filled and has high mechanical and chemical resistance.

USES

Sika® Icosit® KC 450/30 is used for:

- Filling of joints between steel, defined asphalt types, concrete, granite, paving stones and rails in road-track superstructure.
- Fixing and sealing filler blocks (rubber or concrete-based) to the web of grooved rails for in-street track-work installation.
- Movement joints in roads or other situations where early exposure to traffic is required.

CHARACTERISTICS / ADVANTAGES

- High movement capability: $\pm 25\%$ (EN 15651-4) and $\pm 35\%$ (EN 14188-2).
- Very good mechanical resistance.
- Very good resistance to specific chemicals.
- Remains elastic over a very wide temperature range.
- Rapid exposure to traffic: recessed and broadcasted joints can be opened to traffic after a few hours.
- Low stress on joint flanks.
- Suitable for joint widths up to 70 mm.

APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 15651-4: Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 4: Sealants for pedestrian walkways.
- CE marking and declaration of performance based on EN 14188-2: Joint fillers and sealants — Part 2: Specifications for cold applied sealants.
- Skid Resistance Testing to BS 13036-4, Sika® Icosit® KC 450/30, Corehard, Test Report No. REP/0725/SK/PTV/002.

PRODUCT INFORMATION

Chemical Base	Sika® i-Cure® Technology polyurethane accelerated with Sika® Booster-Technology	
Packaging	Part A Sika® Icosit® KC 450/30	10 L container
	Part B Sika® Icosit® KC 450/30 Booster	150 ml foil packs, 5 per box
NOTE: Kits are sold in multiples of five Part A and five Part B Components.		
Colour	Black and concrete grey	
Shelf Life	12 months from date of production	

Storage Conditions

The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging.
Refer to the current Safety Data Sheet for information on safe handling and storage.

Density	Part A	(1.40 ± 0.1) kg/l	(ISO 1183-1)
	Part B	(1.15 ± 0.1) kg/l	
	Mixed Product	(1.40 ± 0.1) kg/l	

Volatile organic compound (VOC) content Solvent-free in accordance with TRGS 610

TECHNICAL INFORMATION

Shore A Hardness	After 28 days	28	(EN ISO 868)
	After 8 hours	16	

Secant Tensile Modulus 0.45 N/mm² at 100 % elongation (+23 °C) (ISO 8339)

Elongation at Break 700 % (ISO 37)

Elastic Recovery 90 % (EN ISO 7389)

Tear Propagation Resistance 8.0 N/mm (ISO 34-2)

Movement Capability ± 25 % (EN ISO 9047)
± 35 % (EN 14188-2)

Chemical Resistance Sika® Icosit® KC 450/30 is resistant to:

- Water
- Sea water
- Diluted alkali
- Cement slurry
- Neutral water-based dispersed detergents or cleaners
- Domestic and municipal sewage

Sika® Icosit® KC 450/30 is temporarily resistant (72 hours) to:

- Diesel
- Oil
- Jet fuel

Sika® Icosit® KC 450/30 is not resistant to:

- Alcohols
- Concentrated organic and inorganic acids
- Concentrated alkalis
- Hydrocarbons other than those already listed

Contact Sika® Technical Services for additional information.

Service Temperature	Maximum	+80 °C
	Minimum	-40 °C

APPLICATION INFORMATION

Mixing Ratio Part A : Part B 100 : 1.5 by volume

Product Temperature Maximum +40 °C
Minimum +5 °C

Ambient Air Temperature Maximum +40 °C
Minimum +5 °C

Relative Air Humidity Maximum 90 %
Minimum 30 %

Dew Point	Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point.		
Substrate Temperature	Maximum	+40 °C	
	Minimum	+5 °C	
	NOTE: Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point.		
Pot Life	At +23 °C and 50 % R.H.	~20 minutes	
Curing Time	Function	Curing conditions	Time
	Full mechanical properties	+23 °C and 50 % R.H.	24 hours
	Trafficable with rubber car tyres (broadcast and recessed joint)	+23 °C and 50 % R.H.	3.5 hours
Tack Free Time	Without broadcast at +23 °C and 50 % R.H.	3.5 hours	
	With broadcast at +23 °C and 50 % R.H.	1 hour	

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.

FURTHER DOCUMENTS

Refer to the following document:

- Application Manual - Joint Maintenance, Cleaning and Renovation.

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.

Regulation (EC) No 1907/2006 (REACH) - Mandatory training

As from 24 August 2023 adequate training is required before industrial or professional use of this product.

For more information and a link to the training visit

www.sika.com/pu-training.



APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Concrete substrates can be dry or matt damp with no visible surface moisture. All other substrates must be dry.

All substrates must be clean, sound and free from oils, grease, dust, laitance and loose or friable particles. All dust, loose and friable material must be completely removed from all surfaces before application of any activators, primers or sealant.

SUBSTRATE PREPARATION

Poor adhesion due to inadequate surface preparation

NOTE: Primers are adhesion promoters. Primers cannot replace proper surface preparation and surface cleaning.

- Do not use primers for improving poorly prepared or poorly cleaned joint surfaces.

For optimum adhesion and critical, high performance applications, such as rail connection joints, highly stressed joints, extreme weather exposure or water immersion, the following priming and pre-treatment procedures must be followed:

ASPHALT (COMPLYING WITH EN 13108-1 AND EN 13108-6)

Preconditions

Fresh cut asphalt must have a bonding surface with minimum 50 % exposed aggregate.

- Prime the surface with Sika® Primer-115 applied with a brush.

For more detailed information especially before application on asphalt, rubber or EPDM, please contact Sika® Technical Services.

CONCRETE, STEEL, STAINLESS STEEL

- **IMPORTANT:** Avoid excessive application of primer to avoid creating puddles. Prime the surface with Sika® Primer-3 N or Sika® Primer-115 applied with a brush.

For more details of the primer or pretreatment products, refer to the corresponding Product Data Sheet. Contact Sika® Technical Services for additional information.

DAMP OR GREEN CONCRETE

- Prime the surface with Sikadur®-32+ by brush, refer to Product Data Sheet.

MIXING

1. Mix Part A for 60 to 90 seconds using an electric mixer with a U-shaped paddle (~600 rpm).
2. Add Part B (Booster) to Part A.
3. **IMPORTANT:** Do not mix excessively. Mix Part A + B (Booster) continuously for 2 to 3 minutes until a uniform mix is achieved.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, Application Manuals and Working Instructions, which must always be adjusted to the actual site conditions.

PRIMING

- Prime the joint surfaces as recommended in substrate preparation. **NOTE:** Avoid excessive application of the primer.

APPLICATION

1. Fill the joint, leaving a 3 mm recess without trapping air. Pour the Product into the joint ensuring that it comes into full contact with the adhesion area of the joint.
2. If required, wait ~1 hour (at +23 °C) before broadcasting the joint surface with quartz sand.

Application to sloped sections

NOTE: Between 15 to 70 mm width and thickness, the Product is suitable for application to sections with a maximum longitudinal slope of 0.0 % to 3.0 %. For applications on sections with a greater longitudinal slope, add Sika® Extender T up to a maximum of 3 % by weight.

1. Prior to full project application, conduct trials to define the correct addition of Sika® Extender T required.
2. For applications other than 15 to 70 mm width and thickness, contact Sika® Technical Services for further information.

CLEANING OF TOOLS

Clean all tools and application equipment immediately after use with Sika® Remover-208, Sika® Cleaning Wipes-100 or Sika® Thinner C. Once cured, hardened material can only be removed 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

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