BUILDING TRUST

PRODUCT DATA SHEET

Sika® Icosit® KC 320/50

2-part polyurethane grout for continuous embedded tracks (Shore Hardness A 58)

PRODUCT DESCRIPTION

Sika® Icosit® KC 320/50 is a flexible 2-part polyurethane polymer resin grout. It is designed as a vibration absorbing, load-bearing, flexible grout for fixing grooved or T–rails onto concrete slabs, steel bridge decks and tunnel invert slabs. Particularly suitable for embedded (floating) rail designs.

USES

Sika® Icosit® KC 320/50 may only be used by experienced professionals.

As a noise and vibration reducing grout for continuous embedded grooved or T–rails and road crossing applications.

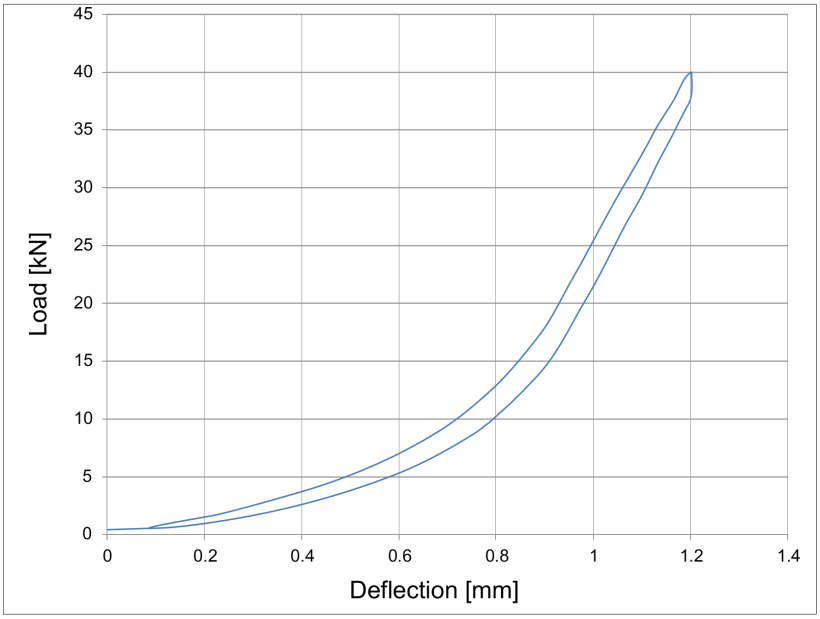
CHARACTERISTICS / ADVANTAGES

- Noise and vibration suppression.
- More uniform load distribution into substructure.
- Watertight undersealing.
- Flexible, elastic (Shore Hardness A 58).
- Damping, compressible.
- Good electrical insulation against stray currents.
- Excellent adhesion on various substrates.
- Levels out tolerances.
- Suitable as a powerful, shear-resistant adhesive.
- Absorbs dynamic stresses and prolongs the life of concrete substructure.
- Insensitive to moisture.
- Long durability, less maintenance.

PRODUCT INFORMATION

Chemical Base	2-part polyurethane grout		
Packaging	Part A	9,1 kg container	
	Part B	0,9 kg container	
	A + B	10 kg	
Shelf Life	9 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 +10 °C and +25 °C. Always refer to packaging.		
Colour	Grey		
Density	Part A	~1 kg/l	(ISO 2811-1)
	Part B	~1,2 kg/l	(ISO 2811-1)
	A + B	~1 kg/l	(ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness	58 ± 5 (after 28 days) Shore hardness assists with material identification and assessing the curing progress on site.
Compressive stiffness	**Load-Deflection Diagram**  Static stiffness determined according to DIN 45673-1. Test specimen dimensions 1000 x 180 x 25 mm. Spring index c = 54 kN/mm, determined as per the secant method between 8 kN and 32 kN.
Tensile Strength	~1,4 N/mm² (ISO 527)
Elongation at Break	~80 % (ISO 527)
Thermal Resistance	-40 °C min. / +80 °C max. Short term +150 °C max.
Chemical Resistance	**Long-term resistant against:** ▪ Water ▪ Most detergents ▪ Sea water, alkaline water **Short-term resistant against:** ▪ Mineral oils, diesel fuel **Short-term or no resistance against:** ▪ Organic solvents (ester, ketone, aromates), alcohol and thinners ▪ Concentrated lyes and acids Contact Sika Technical Services for specific information.

SYSTEM INFORMATION

System Structure	System products: ▪ Sika® Icosit® KC 320/50 ▪ Icosit® KC 330 Primer ▪ SikaCor®-299 Airless (steel deck / baseplate / rail coating)

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B = 100 : 10 (parts by weight)
Consumption	~1 kg per litre of volume to be sealed
Layer Thickness	Minimum 15 mm Maximum 60 mm
Product Temperature	Condition product parts before application preferably at ~+15 °C to assist with flow and curing speed.
Ambient Air Temperature	+5 °C min. / +35 °C max.
Relative Air Humidity	80 % max.
Substrate Temperature	+5 °C min. / +35 °C max.
Substrate Moisture Content	Dry
Pot Life	~15 minutes at +20 °C After this time, the mixture becomes unusable. Higher temperatures will shorten pot life.
Curing Time	Tack-free ~2 hours at +20 °C Traffickable ~24 hours at +20 °C

Curing Rate

Shore A	Curing Temperature		
Curing Time	**5 °C**	**23 °C**	**35 °C**
2 h	-	~10	~21
4 h	-	~21	~30
7 h	~8	~29	~35
1 d	~28	~40	~45
3 d	~36	~49	~53
7 d	~44	~52	~55
14 d	~45	~53	~57

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.

LIMITATIONS

- To achieve the optimum flow performance, condition the material to a temperature of +15 °C before application.
- Undersealing layer thickness must be a minimum 15 mm and maximum 60 mm.
- To achieve maximum adhesion on concrete, loose particles and cement laitance must be removed mechanically, e.g. by blast cleaning or scabbling.
- Use of appropriate Sika Primers will improve adhesion and durability.
- Do not add any solvents to product.
- Standing water must be removed (e.g. by vacuum extraction or oil free compressed air) before pouring Sika® Icosit® KC 320/50.

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

Substrate must be sound, free from oil, grease, loose and friable particles.
Slightly damp substrates are acceptable. Standing water must be removed (e.g. by vacuum extraction or oil free compressed air) before pouring Sika® Icosit® KC 320/50.

SUBSTRATE PREPARATION

To improve adhesion, apply Icosit® KC 330 Primer as a primer on absorbent substrates (e.g. concrete).
For additional corrosion protection, use SikaCor®-299 Airless and Icosit® KC 330 Primer in combination to coat the steel surfaces.
Immediately blind (broadcast) the freshly applied coated surfaces with quartz sand (0,4–0,7 mm granulometry).
Always comply with the waiting time limits between application of SikaCor®-299 Airless, Icosit® KC 330

Primer and pouring of Sika® Icosit® KC 320/50.
Refer to the individual Product Data Sheets for more information.

MIXING

Sika® Icosit® KC 320/50 is supplied in pre-weighed composite units consisting of parts A + B. Part A must be stirred thoroughly before being mixed with part B.

10 kg units

The following mixing instructions must be carried out:

- Use an electric or pneumatic mixer with basket type stirrer (diameter 120–140 mm, speed ~600–800 rpm).
- Mixing time ~60–80 seconds.
- Ensure material is mixed from the container walls and the base by the stirrer during mixing.

APPLICATION METHOD / TOOLS

Immediately after mixing, pour Sika® Icosit® KC 320/50 between the baseplate and substrate using only the gap provided for pouring. Ensure a continuous grout flow from one side to the other to avoid trapping, continue to pour until grout appears at the gap on the opposite side. After a waiting time of ~4 hours, the formwork can be removed.

CLEANING OF TOOLS

Mixing and application tools must be cleaned at regular intervals and immediately after use with Sika® Cleaner-5. 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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