

PRODUCT DATA SHEET

Icosit® KC 340/45

2-PART POLYURETHANE GROUT FOR RAIL FIXING

DESCRIPTION

Icosit® KC 340/45 is a flexible 2-part polyurethane polymer resin grout that can be applied manually or by machine. 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

Icosit® KC 340/45 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

- Medium axle loads and standard deflection
- Noise & vibration suppression
- More uniform load distribution into substructure
- Watertight undersealing
- Flexible, elastic (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
- Elastic (shore A 55) - compressible
- Long life expectancy
- Long durability, less maintenance

PRODUCT INFORMATION

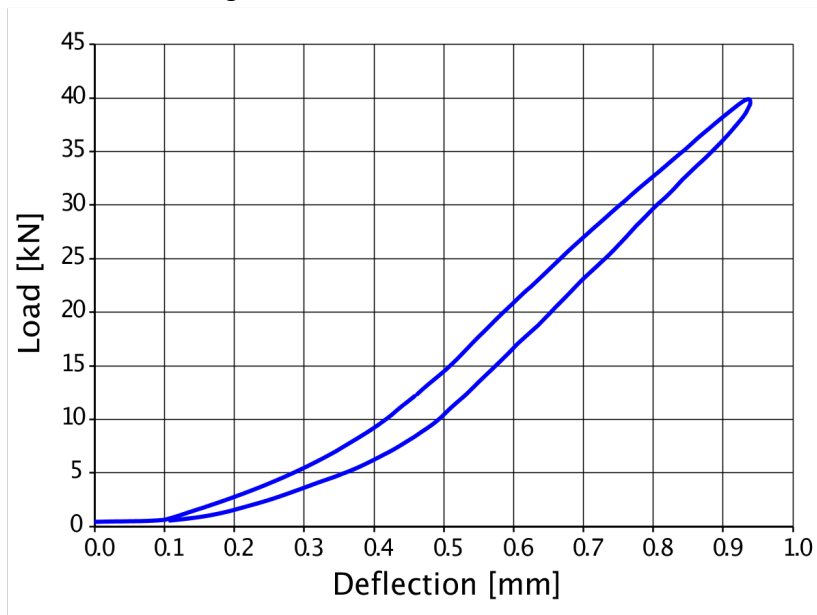
Chemical Base	2-part polyurethane grout		
Packaging		Manual application	Machine application
	Part A	9.1 kg container	160 kg drum
	Part B	0.9 kg container	16 kg container
	A + B	10 kg	176 kg
Colour	Light grey		
Shelf Life	12 months from date of production		
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry and cool condition, protect from direct sunlight.		
Density	Part A	~ 0.87 kg/l	(ISO 2811-1)
	Part B	~ 1.23 kg/l	
	A + B	~ 0.90 kg/l	(ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness	55 ± 5 (after 28 days) Shore hardness assists with material identification and assessing the curing progress on site.
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Compressive Stiffness

Load-Deflection Diagram DIN 45673-1



Static stiffness determined analogously to DIN 45673-1. Test specimen dimensions 1000 x 180 x 25 mm.
Bedding figure $c = 48 \text{ kN/mm}$, determined as per the secant method between 4 and 32 kN.

Tensile Strength	~ 1.7 N/mm ²	(ISO 527)
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Elongation at Break	~ 120 %	(ISO 527)
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Chemical Resistance

Long-term resistant against:

- Water
- Most detergents
- Sea water

Temporary resistant against:

- Mineral oils, diesel fuel

Short-term or no resistance against:

- Organic solvents (ester, ketone, aromates) and alcohol
- Concentrated acids and lyes

Contact Sika Technical Services for specific information.

Service Temperature	-40 °C minimum / +80 °C maximum short term up to +150 °C
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Electrical Resistivity	~ 2.85 x 10 ⁹ Ω·m	(DIN VDE 0100-610 and DIN IEC 93)
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System Structure

System products:

- Icosit® KC 340/45
- 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)
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Consumption	0.9 kg per litre of volume to be sealed
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Layer Thickness	Minimum. 15 mm Maximum. 60 mm
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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	90 % max.			
Substrate Temperature	+5 °C min. / +35 °C max.			
Substrate Moisture Content	Dry to matt damp			
Pot Life	~ 10 minutes at +20 °C After this time, the mixture becomes unuseable. Higher temperatures will shorten potlife.			
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	-	~ 15	~ 20
	4 h	-	~ 25	~ 30
	7 h	~ 10	~ 30	~ 45
	1 d	~ 30	~ 40	~ 45
	3 d	~ 40	~ 50	~ 55
	7 d	~ 45	~ 55	~ 55
	14 d	~ 45	~ 55	~ 55
Waiting Time / Overcoating	On primer or coating at +20 °C			
		Minimum	Maximum	
	Icosit® KC 330 Primer	1 hour	3 days	
SikaCor®-299 Airless	24 hours	7 days		

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 Icosit® KC 340/45.

SUBSTRATE PREPARATION

To improve adhesion, apply Icosit® KC 330 Primer as a primer on absorbent substrates (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 Icosit® KC 340/45.

Refer to the individual Product Data Sheets for more information.

MIXING

Icosit® KC 340/45 is supplied in pre-weighed composite units consisting of parts A + B. Part A must be stirred thoroughly before being mixed with part B.

6 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.

176 kg units

Recommended mixer for stirring Part-A in 160 kg drums:

Geppert Rührtechnik GmbH gear stirrer GRS 300/1.5 equipped with three blades Ø 300 mm. Gear stirrer must be mounted on a drum lid which replaces the original lid during stirring. Stirring time ~5 minutes.

APPLICATION METHOD / TOOLS

Material is suitable for application with special 2-part casting machines. Correct mix ratio must be carried out. Part A must be stirred at regular intervals. Reference must be made to equipment supplier's instruction manual.

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.

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 Icosit® KC 340/45.

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.

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.

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 (MSDS) containing physical, ecological, toxicological and other safety-related data.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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