

PRODUCT DATA SHEET

Sika® Icosit® KC 340/65

Two-part polyurethane grout for continuous embedded tracks with high axle loads

DESCRIPTION

Sika® Icosit® KC 340/65 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

Sika® Icosit® KC 340/65 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.

FEATURES

- Heavy axle loads and standard deflection
- Noise & vibration suppression
- More uniform load distribution into substructure
- Watertight undersealing
- Flexible, elastic (shore A 70)
- 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

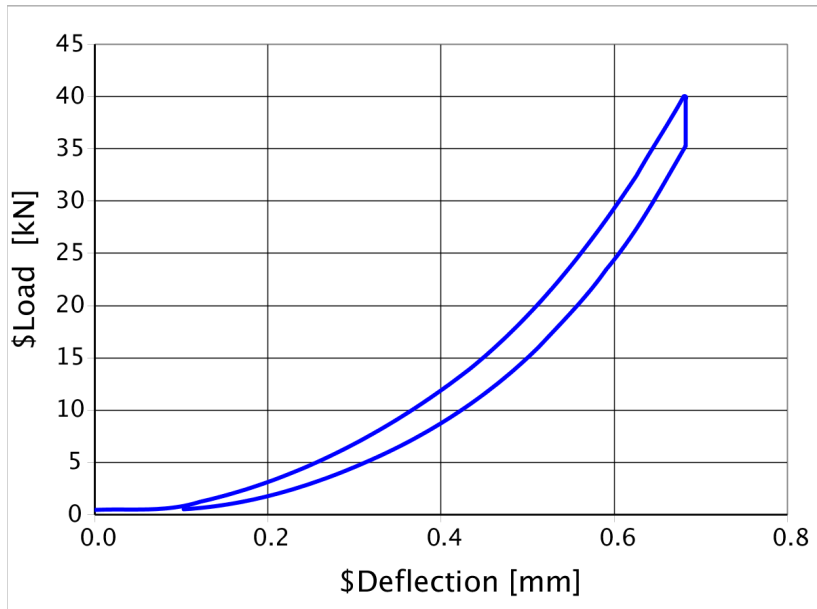
PRODUCT INFORMATION

Composition	2-part polyurethane		
Packaging		Manual application	Machine application
	Part A	8.7 kg container	160 kg drum
	Part B	1.3 kg container	24 kg container
	Part A + B	10 kg	184 kg
Colour	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 +10 °C and +25 °C. Always refer to packaging.		
Density	Part A	0.9 kg/L	
	Part B	1.2 kg/L	
	Part A + B	0.9 kg/L	

TECHNICAL INFORMATION

Shore A hardness	70 ± 5 (after 28 days) Shore hardness assists with material identification and assessing the curing progress on site.	(ISO 868)
Tensile strength	3.0 N/mm ²	
Tensile strain at break	165 %	
Chemical resistance	<p>Long-term resistant against:</p> <ul style="list-style-type: none"> ▪ Water ▪ Most detergents ▪ Sea water <p>Temporary resistant against:</p> <ul style="list-style-type: none"> ▪ Mineral oils, diesel fuel <p>Short-term or no resistance against:</p> <ul style="list-style-type: none"> ▪ Organic solvents (ester, ketone , aromates) and alcohol ▪ Concentrated acids and lyes <p>Contact Sika Technical Services for specific information.</p>	
Electrical resistivity	~5.48 × 10 ⁹ Ω·m	
Service temperature	-40 °C minimum / +80 °C maximum short term +150 °C maximum	

Compressive stiffness



Static stiffness determined according to DIN 45673-1.

Test specimen dimensions: 1000 x 180 x 25 mm (pure material value measured without rail)

Preload: 1000 N

Testing speed: 2 kN/s

Maximum load: 50 kN

Bedding figure $k_{stat} = 192$ [(kN/mm)/m] ($\pm 10\%$)*, determined as per the secant method between 8 and 32 kN.

*Deviation of the bedding figure and the curve are $\pm 10\%$.

APPLICATION INFORMATION

Mixing ratio	Part A : Part B = 100 : 15 (parts by weight)
Consumption	0.9 kg per litre of volume to be sealed
Layer thickness	Minimum 15 mm Maximum 60 mm

Material 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	8 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 Trafficable: 12 hours at +20 °C				
Curing rate	Shore A - Curing Time	Curing rate at 0 °C	Curing rate at +5 °C	Curing rate at +23 °C	Curing rate at +35 °C
	1 h	-	-	30	35
	2 h	-	20	40	45
	4 h	20	30	45	50
	7 h	35	40	50	55
	1 d	55	55	60	65
	3 d	60	60	65	65
	7 d	65	65	65	65
	14 d	70	65	65	65
Waiting time to overcoating	Waiting time for applying the Product on primer or coating at +20 °C:				
	Product	Minimum	Maximum		
	Icosit® KC 330 Primer	1 hour	3 days		
	Sika® Primer-115	0.5 hour	8 hours		
	Sikadur®-32+	24 hours	7 days		

SYSTEM INFORMATION

System structure

System products:

- Sika® Icosit® KC 340/65
- Sikadur®-32+ for steel surfaces and green concrete
- Sika® Primer-115 for steel surfaces and dry and matt damp mature concrete
- Icosit® KC 330 Primer

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.

IMPORTANT CONSIDERATIONS

- 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 before pouring.

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 Safety Data Sheet (SDS) containing 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 340/65.

SUBSTRATE PREPARATION

To improve adhesion, apply Icosit® KC 330 Primer as a primer on absorbent substrates (concrete). For corrosion protection, please contact local Sika technical service. Always comply with the waiting time limits between application of Icosit KC 330 Primer and pouring of Sika® Icosit® KC 340/65. Refer to the individual Product Data Sheets for more information.

MIXING

The Product is supplied in pre-weighed composite units consisting of parts A + B.

Do not add any solvents to the Product.

SMALL PACKAGING UNITS

1. Use an electric or pneumatic mixer with spiral or basket stirrer, diameter 120–140 mm, speed 600–800 rpm.
2. Stir Part A thoroughly until the material is completely homogeneous for at least 30 seconds in the original container.
3. Add Part B and mix for a further 60–80 seconds. Note Ensure the material from the container walls and the base is also mixed in.
4. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight-edge trowel at least once to ensure complete mixing.

BIG PACKAGING UNITS

- Large volumes of the Product can be mixed and applied with special two-part casting machines, which both mix and pump the material.
- Large volumes of the Product can also be mixed using geared mixers, and application is performed separately. A suitable geared mixer is the GRS 300/1,5 from Gepert Rührtechnik GmbH, equipped with three blades Ø 300 mm. Refer to the equipment supplier's instruction manual. Mount the agitator shaft on a drum lid which replaces the original lid during stirring. Stir Part A thoroughly, then add Part B and stir for approx. 5 minutes.

Contact Sika Technical Services for information about suitable mixing machines.

APPLICATION

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.

Green and wet concrete:

Freshly applied Sikadur®-32+ with theoretical consumption: ~0.60 kg/m² should be broadcasted with quartz sand, granulometry: ~0.2 up to ~0.8 mm, theoretical consumption: ~2 kg/m².

1) Concrete substrates: "green", the mat-damp concrete surface, after at least the first day of maturation, and on a min 14 days old concrete.

Substrate must be solid, rough and clean: the concrete surface should be free from loose fractions, dust, cement laitance, oil stains, grease and other contaminants.

a) "Green", the mat-damp concrete surface, without a shiny layer of water on the surface (may be locally dry

or mat-damp, with light and dark spots); should meet the following requirements, after at least the 1st day of maturing: the designed concrete class should be at least C30/37; the water/cement ratio of the designed concrete should be w/c= 0.50; the surface of fresh concrete should be "brushed" about 6-8 hours after mixing the concrete mixture with the use of stiff brushes in order to remove the cement laitance surface.

b) Mature concrete substrate (min 14 days old): substrate strength tested using the "pull-off" method should be at least 1.5 MPa; concrete with no visible traces of moisture and no darkening caused by moisture. The concrete substrates must be prepared mechanically using suitable abrasive blast cleaning or planing / scarifying equipment to remove cement laitance and achieve an open textured gripping surface. High spots can be removed by grinding.

2) Steel substrates must be prepared mechanically using suitable abrasive blast cleaning to remove all corrosion products and achieve a bright metal finish. All dust, loose and friable material must be completely removed from all surfaces before application of the product and associated system products, preferably by vacuum extraction equipment.

Waiting Time / Overcoating: Minimum 24 hours, maximum 7 days

CLEANING OF EQUIPMENT

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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

Product Data Sheet

Sika® Icosit® KC 340/65
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will be supplied on request.

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Product Data Sheet
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