BUILDING TRUST

PRODUCT DATA SHEET

Sika® Icosit® KC 340/35

2-part polyurethane grout for continuous embedded tracks (shore A 40)

PRODUCT DESCRIPTION

Sika® Icosit® KC 340/35 is a flexible two-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 the continuous fixing of embedded grooved rails.
Particularly suitable for embedded (floating) rail designs.

USES

Sika® Icosit® KC 340/35 may only be used by experienced professionals.

As a noise and vibration reducing grout for continuous embedded tram or LRT track sections and road crossing applications.

CHARACTERISTICS / ADVANTAGES

- Light axle loads and high deflection.
- Noise and vibration suppression.
- More uniform load distribution into substructure.
- Watertight undersealing.
- Flexible, elastic (shore A 40).
- 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		
Packaging		**Manual application**	**Machine application**
	Part A	8,9 kg container	160 kg drum
	Part B	1,1 kg container	19,2 kg container
	A + B	10 kg	179,2 kg
	Refer to current price list for packaging variations.		
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.		
Colour	Light grey		
Density	Part A	~0,9 kg/l	(ISO 2811-1)
	Part B	~1,2 kg/l	(ISO 2811-1)
	A + B	~1 kg/l	(ISO 1183-1)

SYSTEM INFORMATION

System Structure

- Sika® Icosit® KC 340/35
- Sikadur®-32 +: For green and wet concrete
- Icosit® KC 330 Primer

TECHNICAL INFORMATION

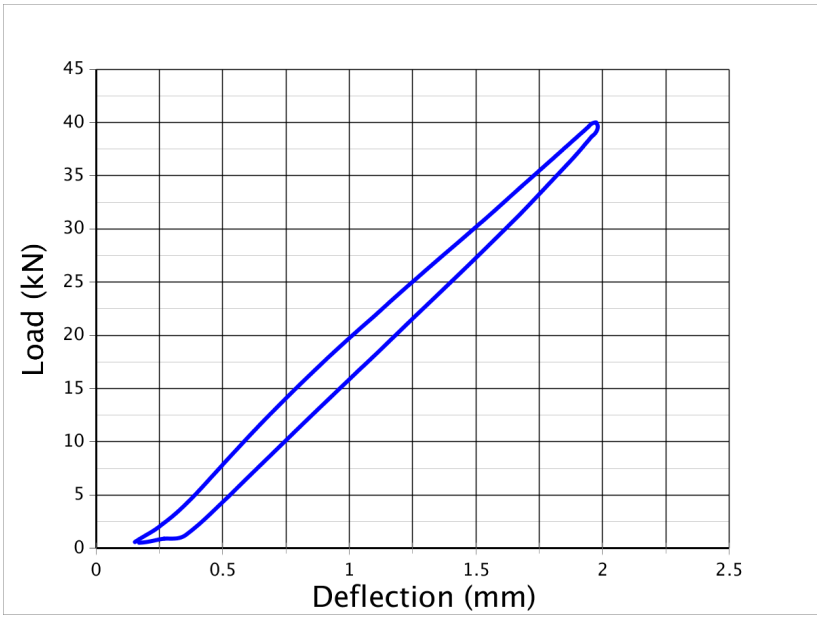
Shore A Hardness

40 ± 5 (after 28 days) (ISO 868)

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.
Dimensions of test specimen 1000 × 180 × 25 mm;
Spring index k_{stat} = 25 kN/mm (± 10 %), determined as per the secant method between 4 and 32 kN.

Tensile Strength

~0,9 N/mm² (ISO 527)

Elongation at Break

~180 % (ISO 527)

Electrical Resistivity

~1,5 × 10^9 Ω·m (DIN VDE 0100-610 and DIN IEC 93)

Service Temperature

-40 °C minimum / +80 °C maximum
Short term: +150 °C maximum

Chemical Resistance

Long-term resistant against:

- Water
- Most detergents
- Sea water
- Alkaline water

Short-term resistant against:

- Mineral oils, diesel fuel, vegetable and animal fat

Short-term or no resistance against:

- Organic solvents (ester, ketone , aromates) and alcohol
- Solvents and thinners
- Strong lyes and acids

Contact Sika Technical Services for specific information.

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B = 100 : 12 (parts by weight)
Consumption	~1 kg of Sika® Icosit® KC 340/35 per litre of volume to be filled up.
Layer Thickness	15 mm minimum 60 mm maximum
Product Temperature	Condition product parts before application preferably at ~+15 °C to assist with flow and curing speed
Ambient Air Temperature	+5 °C minimum / +35 °C maximum
Relative Air Humidity	90 % maximum
Substrate Temperature	+5 °C minimum / +35 °C maximum
Substrate Moisture Content	Dry to matt damp
Pot Life	~11–12 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 ~24 hours at +20 °C

Curing Rate

Shore A	Curing Temperature		
Curing Time	**5 °C**	**23 °C**	**35 °C**
2 hours	-	~10	~15
3 hours	-	~15	~20
4 hours	-	~20	~25
7 hours	-	~25	~25
1 day	~20	~30	~30
2 days	~25	~30	~30
7 days	~30	~30	~30
14 days	~30	~30	~30

Waiting Time / Overcoating

Waiting time between primer and Sika® Icosit® KC 340/35 at 20 °C:

	Minimum	Maximum
Icosit® KC 330 Primer	1 hour	3 days
Sikadur®-32 +	24 hours	7 days

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 340/35.

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

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 340/35.

SUBSTRATE PREPARATION

To improve adhesion, apply Icosit® KC 330 Primer as a primer on absorbent substrates (concrete).
Always comply with the waiting time limits between application of Icosit KC 330 Primer and pouring of Sika® Icosit® KC 340/35.
Refer to the individual Product Data Sheets for more information.

MIXING

Sika® Icosit® KC 340/35 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 or helical 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.
179,2 kg units
Recommended mixer for stirring Part-A in 179,2 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.
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 according to EN 206 + A1: 2016-12 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 TOOLS

Mixing and application tools must be cleaned at regular intervals and immediately after use with Sika® Thinner C. 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.

SIKA LIMITED
Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited