BUILDING TRUST

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.

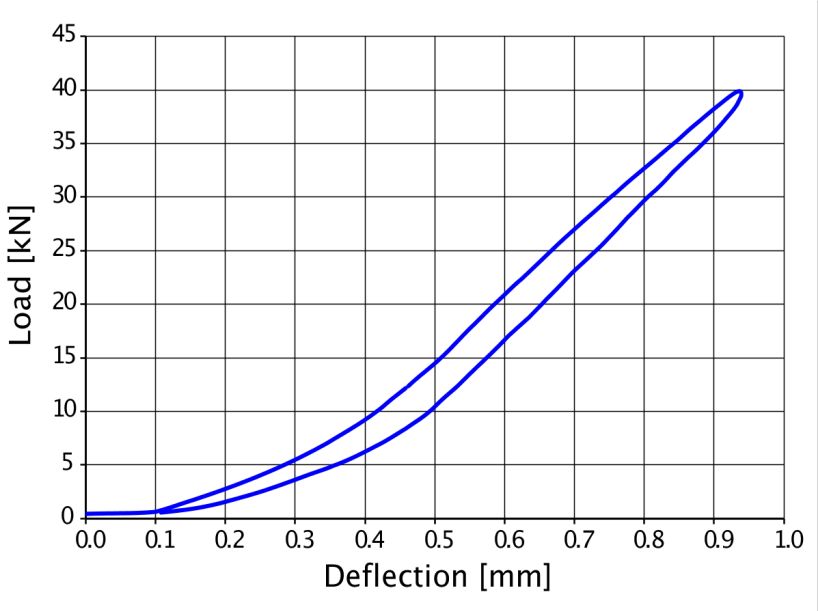
CHARACTERISTICS / ADVANTAGES

- 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

Composition	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 conditions at temperatures between +10 °C and +25 °C. Always refer to packaging.		
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.
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 kN/mm, determined as per the secant method between 4 and 32 kN.
Tensile Strength	~1,7 N/mm^2 (ISO 527)
Elongation at Break	~120 % (ISO 527)
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
Electrical Resistivity	~2,85 x 10^9 Ω·m (DIN VDE 0100-610 and DIN IEC 93)
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)
Consumption	0,9 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	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 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.

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 (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 Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

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