

# PRODUCT DATA SHEET

## Icosit® KC 340/45

2-part polyurethane grout for continuous embedded tracks with medium axle loads

### DESCRIPTION

Icosit® KC 340/45 is a flexible 2-part polyurethane polymer resin grout 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

Icosit® KC 340/45 may only be used by experienced professionals.

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

### CHARACTERISTICS / ADVANTAGES

- Medium axle loads and standard deflection
- Noise & vibration suppression
- Flexible, elastic (shore A 55)
- More uniform load distribution into substructure
- Application manually and by machine
- Watertight undersealing
- 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

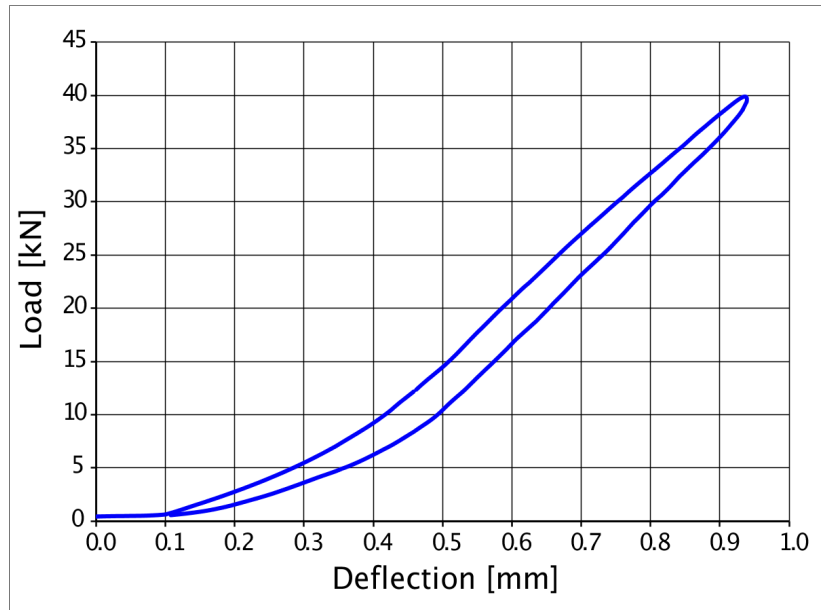
### PRODUCT INFORMATION

|                           |   |                           |                            |
|---------------------------|---|---------------------------|----------------------------|
| <b>Composition</b>        | 2-part polyurethane   |                           |                            |
| <b>Packaging</b>          |   | <b>Manual application</b> | <b>Machine application</b> |
|                           | Part A  | 9,1 kg container          | 160 kg drum                |
|                           | Part B  | 0,9 kg container          | 16 kg container            |
|                           | A + B   | 10 kg                     | 176 kg                     |
| <b>Colour</b>             | Light grey  |                           |                            |
| <b>Shelf life</b>         | 12 months from date of production   |                           |                            |
| <b>Storage conditions</b> | 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. |                           |                            |
| <b>Density</b>            | Part A  | ~0,9 kg/l                 | (ISO 2811-1)               |
|                           | Part B  | ~1,2 kg/l                 | (ISO 2811-1)               |
|                           | A + B   | ~0,9 kg/l                 | (ISO 1183-1)               |

## TECHNICAL INFORMATION

|                  |  |           |
|------------------|--|-----------|
| Shore A hardness | 55 ± 5 (after 28 days)<br>Shore hardness assists with material identification and assessing the curing progress on site. | (ISO 868) |
|------------------|--|-----------|

|                       |                                |
|-----------------------|--------------------------------|
| Compressive stiffness | <b>Load-Deflection Diagram</b> |
|-----------------------|--------------------------------|



Static stiffness determined according to DIN 45673-1.

Test specimen dimensions 1000 x 180 x 25 mm.

Spring index  $k_{\text{stat}} = 48 \text{ kN/mm}$  ( $\pm 10\%$ ), determined as per the secant method between 4 kN and 32 kN.

|                         |                        |           |
|-------------------------|------------------------|-----------|
| Tensile strength        | ~1,7 N/mm <sup>2</sup> | (ISO 527) |
| Tensile strain at break | ~120 %                 | (ISO 527) |

### 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), alcohol and thinners
- Concentrated lyes and acids

Contact Sika Technical Services for specific information.

|                     |   |
|---------------------|---|
| Service temperature | -40 °C min. / +80 °C max.<br>short term up to +150 °C |
|---------------------|---|

|                        |                             |                                   |
|------------------------|-----------------------------|-----------------------------------|
| Electrical resistivity | ~2,85 x 10 <sup>9</sup> Ω·m | (DIN VDE 0100-610 and DIN IEC 93) |
|------------------------|-----------------------------|-----------------------------------|

## SYSTEM INFORMATION

|                  |  |
|------------------|--|
| System structure | <ul style="list-style-type: none"><li>▪ SikaCor®-299 Airless (Steel deck / rail coating)</li><li>▪ Icosit® KC 330 Primer</li><li>▪ Icosit® KC 340/45</li></ul> |
|------------------|--|

## 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             | 15 mm min.<br>60 mm max.   |                           |                |              |
| 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<br>After this time, the mixture becomes unuseable. Higher temperatures will shorten potlife. |                           |                |              |
| Curing time                 | Tack-free  | ~2 hours at +20 °C        |                |              |
|                             | Trafficable  | ~24 hours at +20 °C       |                |              |
| Curing rate                 | <b>Shore A</b>   | <b>Curing Temperature</b> |                |              |
|                             | <b>Curing Time</b>   | <b>5 °C</b>               | <b>23 °C</b>   | <b>35 °C</b> |
|                             | 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 to overcoating |  | <b>Minimum</b>            | <b>Maximum</b> |              |
|                             | Icosit® KC 330 Primer  | 1 hour                    | 3 days         |              |
|                             | SikaCor®-299 Airless   | 24 hours                  | 7 days         |              |

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## ECOLOGY, HEALTH AND SAFETY

### GISCODE: PU 40

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. Further notes and information data sheets on product safety and disposal can be found on the Internet at [www.sika.de](http://www.sika.de).

## 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.

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# 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 (diameter 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

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

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® Reinigungsmittel-5. Hardened material can only be removed mechanically.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## 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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