Construction

Icosit® KC 330/10

2-pack Polyurethane Grout for Railfixing

Description

Icosit® KC 330/10 is a tough-elastic, pourable 2-component polymer grout based on Polyurethane.

Uses

Icosit® KC 330/10 is designed for undersealing discrete and continuous trackwork baseplates where particularly high wheel loads are involved, e.g. for heavy cranes, container gantry cranes, working pits etc. Also suitable as flexible levelling layer for fixing heavy machines in industry to reduce vibration transmission.

Characteristics / Advantages

- Reduces vibration
- Excellent electrical insulation against stray currents
- Levels out tolerances
- Powerful, shear-resistant, load-bearing adhesive
- Long life expectance

Product Information

Composition

2-component Polyurethane

Packaging

Part A	6,6 kg pail
Part B	3,4 kg tin
A + B	10 kg

Colour

Black

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	~ 1,10 kg/litre	(ISO 2811-1)
Part B	~ 1,23 kg/litre	(ISO 2811-1)
A + B	~ 1,10 kg/litre	(ISO 1183-1)

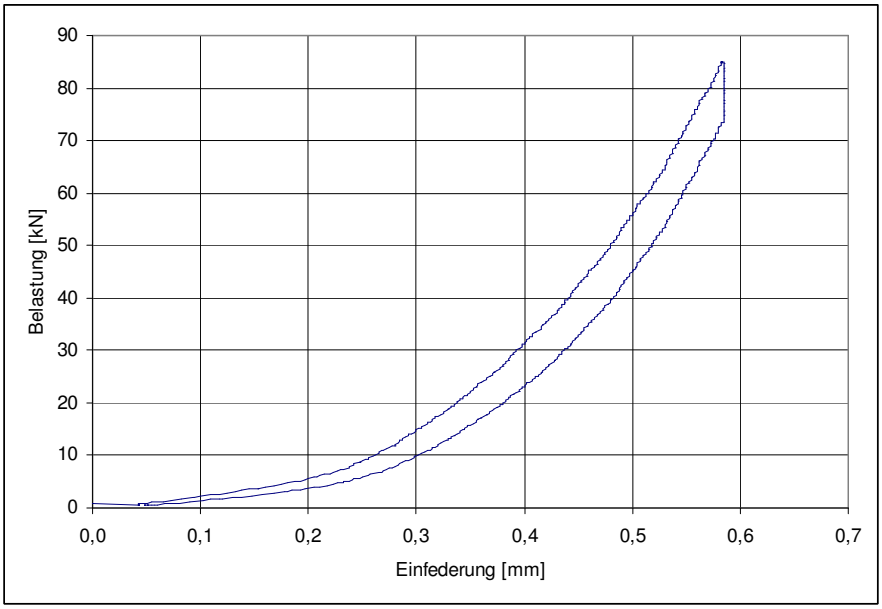
Technical Information

Shore D Hardness

75 ± 5 (after 28 days) (ISO 868)

Shore hardness assists with material identification and assessing the curing progress on site.

Compressive Stiffness



Belastung = load / Einfederung = deflection

Static stiffness analogous to DIN 45673-1.

Dimensions of test specimen: 360 × 160 × 25 mm;

Spring index: c = 222 kN/mm, determined as per the secant method between 17 kN and 68 kN.

Tensile Strength

~ 25 N/mm^2 (ISO 527)

Elongation at Break

~ 30 % (ISO 527)

Chemical Resistance

Long-term resistant against:

- Water
- Most detergents
- Sea water

Temporary resistant against:

- Mineral oils, Diesel fuel

Not or only short-term resistant against:

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

For more details contact our technical service center.

Service Temperature

-40 °C minimum / +80 °C maximum

Short term up to +150 °C

System Information

System Structure

System products:

- Icosit® KC 330/10
- Icosit® KC 330 Primer
- SikaCor®-299 Airless (steel deck / baseplatte / rail coating)

Application Informationen

Mixing Ratio	Part A : Part B = 100 : 52 (parts by weight)
Consumption	~ 1,1 kg per litre of volume to be sealed
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	70 % maximum
Substrate Temperature	+5 °C minimum / +35 °C maximum
Substrate Moisture Content	Dry
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 D	**Curing Temperature**		
Curing Time	**5 °C**	**23 °C**	**35 °C**
1h	-	~ 50	~ 55
2h	~ 35	~ 55	~ 60
3h	~ 45	~ 60	~ 65
4h	-	~ 65	~ 65
5h	~ 55	~ 65	~ 70
6h	~ 55	~ 70	~ 70
7h	~ 60	-	-
1d	~ 70	~ 75	~ 75
4d	~ 75	~ 75	~ 75
7d	~ 75	~ 75	~ 75
14d	~ 75	~ 75	~ 75

Waiting Time / Overcoating	Icosit® KC 330 Primer: 1 h minimum / 3 d maximum SikaCor®-299 Airless: 24 h minimum / 7 d maximum

Application Instruction

Substrate Quality	Substrate must be sound, free from oil, grease, loose and friable particles. Apply Icosit® KC 330/10 only on dry contact surfaces.
Substrate Preperation	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 330/10. Refer to the individual Product Data Sheets for more information.

Mixing

Icosit® KC 330/10 is supplied in pre-weighed composite units consisting of parts A + B. Part A must be stirred thoroughly before being mixed with part B.

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

Application Method

Caution: Material is moisture-sensitive. Do not warm up in water. Apply only to absolutely dry surfaces!

Application technique for direct (sleeperless) fixation of trackwork (discrete fixation):

- Adjust rail to correct line and level.
- Drill holes for anchor bolts.
- Apply appropriate Icosit® KC 330 Primer.
- Fix baseplates to rail foot.
- Fill bolt holes with pourable epoxy grout, consisting of 1 part by weight Icosit® KC 220/60 TX and 1 part by weight dry quartz sand (0,4 – 0,7 mm granulometry).
- Place pre-assembled anchor bolts into grout filled bolt holes.
- Fit shuttering frame (formwork) treated with release agent around the baseplate by leaving a ~ 0,5 cm gap between sides of baseplate and formwork. Provide a gap on one side of the baseplate and formwork of at least 1,5 cm wide for pouring. Seal formwork to prevent leakage of grout.
- Mix Icosit® KC 330/10 in accordance with mixing instructions.
- Immediately after mixing, pour Icosit® KC 330/10 between the baseplate and substrate using only the gap provided for pouring. Ensure a continuous grout flow from one side to the other to avoid trapping, continue to pour until grout appears at the gap on the opposite side.
- After a waiting time of ~ 4 hours, the formwork can be removed.

Cleaning of Equipment

Mixing and application tools must be cleaned at regular intervals and immediately after use with Sika® Reinigungsmittel-5. Cured 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.
- Substrate must be dry.

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.

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.

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. Further notes and information data sheets on product safety and disposal can be found on the Internet at www.sika.de.
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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