

PRODUCT DATA SHEET

Sika® Icosit® KC 240/40

Low wastage, accelerated, tough, fibre-modified, filled urethane acrylate resin designed for rapidly repairing railway sleepers and securing base plates.

DESCRIPTION

Sika® Icosit® KC 240/40 is a highly filled, fibre-reinforced, accelerated, tough, urethane acrylate resin designed for the most demanding applications requiring the highest mechanical performance and outstanding fire and smoke performance. The Product is designed to offer the optimum viscosity for applying to holes in sleepers, whilst preventing filler settlement, is halogen free and does not contain heavy metals.

Over time, rail fixings for securing base plates onto sleepers (wooden and concrete) can work themselves loose. Sika® Icosit® KC 240/40 has been specifically designed for securing rail plastic sleeves to both new and rebored sleepers. Achieving a torque strength of at least 100 N·m in only one hour, the screw spikes can be inserted quickly allowing fast return to service for limited possession work, reducing disruption and maximising output.

Additionally, the product has been innovatively designed to reduce packaging to a minimum, reducing waste. The foil packs contain both elements of the product. When ready to use, simply remove the divider and combine both components. Once combined, one corner can be cut to release the mixed product which is then squeezed into the holes ready to receive the sleeves. One pack is normally sufficient to complete two holes. Unlike cartridges which can contain unmixed residues of components, all Sika® Icosit® KC 240/40 is combined and can be used; in the event of any Product remaining within the foil packs, once cured, it can be considered inert, unlike uncombined residues which may be considered hazardous waste.

USES

Sika® Icosit® KC 240/40 may only be used by experienced professionals.

- Securing plastic sleeves into new and refurbished wooden and concrete railway sleepers, ready to receive screw spikes.
- Rapidly fixing in the most demanding of applications.
- Buildings and general construction.
- Public transport.
- To enable a rapid return to service.
- Applications requiring excellent fire, smoke and toxicity performance.

FEATURES

- Easy to mix and use.
- Low viscosity.
- Rapid cure.
- Excellent toughness and durability.
- Outstanding performance: ≥ 100 N·m of torque achieved in only one hour.
- No post cure required.
- Exceptional fire, smoke and toxicity performance.
- Excellent surface finish.
- Contains fibre strand technology (FST).
- Minimal wastage.
- Packaging ensures all components are combined, eliminating the possibility of hazardous waste residues (unlike cartridges).

PRODUCT INFORMATION

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| Composition | Accelerated urethane acrylate resin with selected additives and fibre strand technology (FST). |
| Packaging | |
| Appearance and colour | Cream paste (mixed product). |
| Shelf life | 6 months when stored correctly. |
| Storage conditions | Sika® Icosit® KC 240/40 should be stored between +5°C and +25°C in the original, unopened container in a dry, well ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents. If stored outside of these recommendations, shelf life will be significantly reduced. Product should be stored at room temperature (~+20°C) for at least 24 hours prior to use and applied before the temperature of the Product falls below +10°C. |
| Volatile organic compound (VOC) content | ~21% |
| Viscosity | ~ 10 Poise NOTE: Determined at +25°C 4500 sec ⁻¹ . |
| Specific gravity | Mixed Product: ~1.62 kg/m ³ NOTE: Determined at +25°C. |
| Tensile strength | ~23 MPa NOTE: Determined on fully cured, hardened Product. |
| Secant tensile modulus | ~7.3 GPa NOTE: Determined on fully cured, hardened Product. |
| Heat deflection temperature | ~+73°C NOTE: Heat deflection temperature under 1.80 MPa load, tested on fully cured, hardened Product. |
| Water absorption | ~25 mg NOTE: Determined on fully cured, hardened Product. Result after 24 hours at +23°C. |
| Surface hardness | Barcol Hardness: ~40 NOTE: Determined on fully cured, hardened Product. |
| Elongation at break | ~2.1% NOTE: Determined on fully cured, hardened Product. |
| Peak exotherm | ~+69°C |
| Material temperature | +10°C minimum / +40°C maximum |
| Ambient air temperature | +10°C minimum / +40°C maximum |
| Open Time | ~10 minutes NOTE: At +20°C. Lower temperature will retard the Product, higher temperatures will accelerate. |
| Applied product ready for use | ~1 hour NOTE: At +20°C. |
| Gel time | ~20 to 30 minutes. Geltime to Peak: ~10 minutes. |

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.

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) con-

taining physical, ecological, toxicological and other safety-related data.

SUBSTRATE QUALITY

Mortar and concrete must be at the required design strength. Substrate tensile / compressive strengths (concrete, masonry, natural stone) must be confirmed by testing. Timber should be wholly intact with no splintering, delaminations, signs of decay, etc. The holes must always be clean, dry, free from oil, grease, etc. Loose particles must be removed from the holes.

SUBSTRATE PREPARATION

IMPORTANT

Reduced adhesion due to surface contamination

Surface contaminants such as dust and loose material, including the contaminants generated during substrate preparation, can reduce the Product's performance.

Before applying the Product, clean thoroughly all substrate surfaces using vacuum or dust removal equipment.

Preconditions

Concrete and mortar must be at least 28 days old. Timber must be suitable for the application. Prepare the substrate mechanically using a suitable technique.

1. Remove any debris from pockets or holes.
2. The substrate should have an open-textured, gripping surface profile (timber is accepted as satisfying this requirement, but should be wholly sound with no signs of splintering, delamination, decay, etc. Reboring may be required to achieve this). Substrates must be sound, clean, dry or matt damp, but free of standing water. Substrates must be free of contaminants such as ice, dirt, oil, grease, coatings, laitance, efflorescence, surface treatments and loose friable material.

MIXING

Sika® Icosit® KC 240/40 is supplied in easy to use packs. When ready to apply, the divider should be removed to combine the two components.

Manipulate the packs back and forth to ensure that both components are fully combined, squeezing and pressing along the length of the packs to ensure homogeneous mixing. Mix for ~30 to 60 seconds.

APPLICATION

Once fully mixed, one corner of the packs can be cut off with scissors to create a hole through which the Product can be extruded. Position the cut hole over the application area and work the Product from the packs into the desired position. Experience has shown that one pack will typically fill two railway sleeper holes (apply approximately halfway up each hole). Sufficient Product shall be added to ensure full contact (i.e. some adhesive must appear at the top of holes to indicate full application). All mixed Product must be applied within 10 minutes. Dispose of the packaging in accordance with local waste requirements (hardened, mixed material is categorised as inert).

CLEANING OF EQUIPMENT

Clean all tools and application equipment with Sika® Thinner C immediately after use. 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 will be supplied on request.

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Product Data Sheet

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