BUILDING TRUST

PRODUCT DATA SHEET

Sika® Icosit® KC 120 Trackfix

(formerly TPH.® TRACKFIX® PUR)

2-component polyurethane resin for ballast bonding in track construction (formerly TPH TRACK-FIX PUR)

PRODUCT DESCRIPTION

Sika® Icosit® KC 120 Trackfix is a rigid, two-component injection resin based on polyurethane. Due to its high mechanical strength, it can be used for efficient strengthening and bonding of ballast in track construction. The reaction time can be variably adjusted by adding Sika® Icosit® KC 120 Trackfix Booster.

USES

Sika® Icosit® KC 120 Trackfix may only be used by experienced professionals.

- Rigid ballast bonding.
- Ballast slope protection.
- Bonding the transitions from ballast superstructure to slab track.
- Fixing and securing sleepers.

CHARACTERISTICS / ADVANTAGES

- High and fast penetration into the ballast.
- Permanent bonding of the ballast bed.
- Provides protection against flying ballast.
- Can be used on dry and damp surfaces.
- Reduction of dust formation during rail operations.
- Easier cleaning of track ballast beds.
- Reduces maintenance.

APPROVALS / STANDARDS

- Approval by the German Federal Railway Authority for operational testing of ballast bonding.
- Reaction to fire behaviour $A2_{fl}$-s1 according to EN 13501-1.

PRODUCT INFORMATION

Chemical Base	Polyurethane resin		
Packaging	Component A	20 kg Canister and 1,000 kg IBC	
	Component B	24 kg Canister and 1,200 kg IBC	
Shelf Life	In unopened original container, 12 months from production date		
Storage Conditions	Store the product in tightly closed original containers in dry and temperature-controlled rooms (+15°C to +25°C).		
Density	Component A	~1.03 g/cm³	(DIN EN ISO 2811-1)
	Component B	~1.23 g/cm³	

TECHNICAL INFORMATION

Compressive Strength	~74 N/mm²	(EN 12390-5)
Flexural Strength	~29 N/mm²	(EN 12390-3)
Tensile Modulus of Elasticity	~2,800 N/mm²	(EN ISO 527)

APPLICATION INFORMATION

Consumption	▪ ~3 to 4 kg/m² for ballast slope reinforcement. ▪ ~1 to 2 kg/m² for bonding ballast bed of up to 15 cm thickness. ▪ ~2 to 4 kg/m² for bonding ballast bed of up to 30 cm thickness. ▪ ~5 to 8 kg/m² for bonding ballast bed of up to 50 cm thickness. NOTE: Consumptions stated here are based on our experiences. Prior to the works, a field test should be conducted within the area in question to enable an accurate calculation of the consumption required for that specific site.
Product Temperature	Minimum +15°C / maximum +30°C
Ambient Air Temperature	Minimum +5°C / maximum +40°C
Substrate Temperature	Minimum +5°C / maximum +30°C
Pot Life	~90 minutes (at +23°C and without the use of Sika® Icosit® KC 120 Trackfix Booster)

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.

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 PREPARATION

Before application, ballast must be inspected and examined by the most appropriate means, in accordance with any requirements, so the works can be suitably planned. The ballast to be bonded should be as dry, clean and free of separating components as possible. A field trial to assess bonding is recommended.

MIXING

The product is usually pumped using two-component pumps. Alternatively, one-component pumps or a 'flooding' process without a pump can be used. For this purpose, A and B components are mixed homogeneously (i.e. without streaks) in a dry and clean container in the specified mixing ratio using an agitator. Due to its relatively long reaction time, the mixed product can then be processed with a one-component pump or by 'flooding' the ballast.

APPLICATION

Both components are pumped directly from the containers using two-component pumps.
Suitable pumps: TPH INJECT PS 25-II and TPH INJECT PS 5-II.
At the end of the separate delivery hoses, the components are brought together in a 'T' or 'Y' piece and then mixed homogeneously (i.e. free of streaks) in the mixing tube by means of a static mixer.
Suitable static mixer: Static mixer 13-32 .
The reaction mixture is applied to the prepared track ballast via a subsequent injection lance in such a way that an even distribution of the product is achieved

('flooding' method). For a simple and even distribution we recommend the use of an appropriate distribution head (approximately 40 cm long T-shaped discharge pipe with outlet openings).
Due to the relatively long reaction time of Sika® Icosit® KC 120 Trackfix, the product can alternatively be processed with a one-component pump. For this purpose, the components are mixed homogeneously (i.e. free of streaks) in a dry and clean vessel with a slow working agitator and then added to the pump.
Suitable pumps: CONTRACTOR 1U and ME 1 K ELEKTRISCH.
After mixing as detailed above, it is also possible to pour the reaction mixture onto the track ballast within the processing time without a pump ('flooding' application method).
The low-viscosity product penetrates quickly into the pore structure of the ballast and bonds or consolidates the ballast permanently.
The areas to be consolidated must be reworked at intervals depending on the penetration behaviour, until the required quantities of resin have been used up and have led to overall consolidation of the ballast.
Alternatively, Sika® Icosit® KC 120 Trackfix can also be injected into the ballast by means of ram lances or placed under the sleeper plane.
Pot life: ~90 minutes (+23°C) without booster.
Foam factor without contact of water: ~1.
Foam factor with contact of water: ~1.5 to 3.
Curing: ~24 hours.
By adding the catalyst Sika® Icosit® KC 120 Trackfix Booster to the Sika® Icosit® KC 120 Trackfix A component, different reaction times can be set according to the application (see Pot Life Table below).

Sika® Icosit® KC 120 Trackfix Booster Quantity	Pot Life (at +20°C)
None	90 minutes
20 g	40 minutes
50 g	12 minutes 30 seconds
100 g	5 minutes 24 seconds
200 g	2 minutes 43 seconds
400 g	1 minute 21 seconds
500 g	0 minute 58 seconds

Pot life was measured at +20°C and in a dry condition. The addition of the accelerator was to 20 kg of component A.

CLEANING OF TOOLS

Clean equipment immediately after use with SikaInject® CL-2. 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