



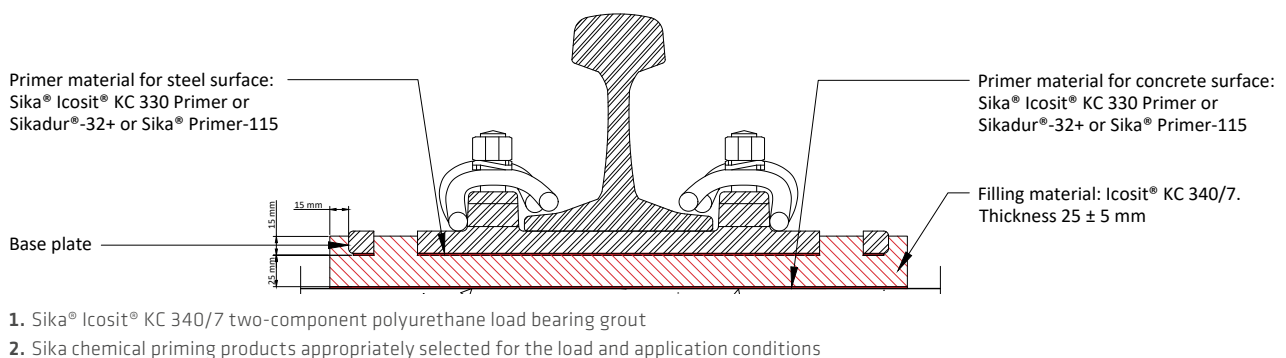
FLEXIBLE RAIL FIXING RAIL FIXING PU GROUTS IN DEPOTS

RAIL FIXING PU GROUTS IN DEPOTS

ROLLING STOCK MAINTENANCE DEPOTS are very important places where, through service and cleaning works carried out in these places, an appropriate level of safety and comfort of the used rolling stock is ensured. Usually, these are inspection and repair halls with social and office facilities, workshops, warehouses, a rolling stock washing facility, service and cleaning stations for wagons, equipped with appropriate technical infrastructure.



THE SYSTEM IS MAINTENANCE-FREE DUE TO THE PRODUCT CHARACTERISTIC.



Due to the very diverse function of these facilities, the high level of chemical loads, the ease of implementation and the expected long-life of the rail fastening system, Sika has developed a very highly rated and durable solution – anchorless **Discrete Fixation** using Sika® Icosit® KC 340/7.

Regardless of the type and size of the baseplates, the pourable, flexible grouts can be adopted to all situations of direct fixation, for all ballastless track types, particularly for special trackwork, e.g. rolling stock service stations.

In an anchorless solution, Discrete Fixation with Sika® Icosit® KC 340/7, the ribbed base plate is bonded to the steel or concrete substrate with Sika® Icosit® KC 340/7 (applied to the prepared and primed surface). The rail is attached to the ribbed base plate by independently operating spring arms that hold the rail firmly.



BENEFITS

Saves installation time due to short cure time

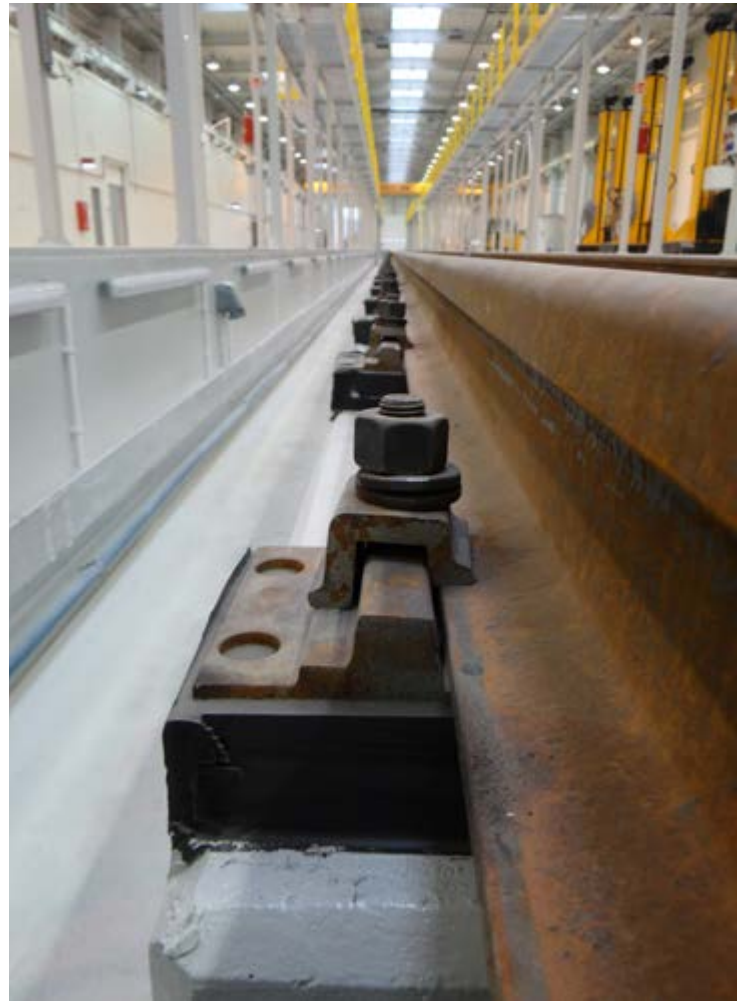
- Saves money due to shorter path interruption, faster installation, long-term maintenance cost reductions, etc.
- Successful in-field service for 30 years

ADVANTAGES

- Flexible, elastic, dimensions tolerance-compensating
- Moisture resistant, no water absorption, frost resistant which ensures watertight track structure
- The product electrical insulation ensures the protection against stray current corrosion
- Permanent fixation of the ribbed baseplate with the rail to the concrete or steel substrate
- Permanent rail alignment results in track geometry stability
- Increased uniform load distribution on the ground
- No corrosion of the base plate and no erosion of concrete from water penetration
- Proper Shore A hardness ensures reduced mechanical wear of vehicles and rails
- Dampening and vibration mitigation
- Efficient Life Cycle Costs (LCC) of the track superstructure is ensured by long durability, and a low maintenance cost

RAIL FIXING PU GROUTS IN DEPOTS

ANCHORLESS DISCRETE FIXATION USING Sika® Icosit® KC 340/7 can be exposed to a maximum axle load of 250 kN on the straight part of a track and at a maximum speed of 20 km/h.



This system meets the requirements for use in the service area as well as in the train wash. In the case of the service zone (dry), thanks to the possibility of using rib pads with a small (~25 cm) width, it creates additional space in the service channel. The high chemical resistance and very high electrical insulation of the track allows the use of the same solution in the (wet) washing and cleaning zone of the rolling stock, extremely important for electrically powered trains. Thanks to the elimination of anchors, this solution is very attractive in terms of cost and provides a shortened execution time compared to other solutions.

Anchorless Discrete Fixation using Sika® Icosit® KC 340/7 has long durability (some projects are already 25 years old) and is maintenance-free, which due to the low level of position costs

makes it very attractive. Resilient, elastic, Anchorless Discrete Fixation using the Sika® Icosit® KC 340/7 pointily loaded, distributes the load over a wider surface area and consequently avoids any damage. Sika® Icosit® KC 340/7 product is an elastic, two-component polyurethane, insensitive to moisture, polymer resin grout. It is designed as a vibration absorbing, load-bearing, flexible grout for discrete fixation of the rails. The Sika® Icosit® KC range has won worldwide renown for its tailor-made, long lasting direct fixation of rails to solid substrates, i.e. concrete and steel. The Icosit® range of products are mostly incorporated in a variety of trackwork designs for track installations. Sika provides technical support in each stage of the project to consultants, operators and contractors for optimum and innovative trackwork solutions under a wide variety of conditions of exposure.

DURABILITY



Trackways are designed to maintain their service and function over long periods of time. During this service life, the concrete, steel and other materials are subjected to many aggressive influences, including variable loading and vibration, extreme weather conditions, freeze and thaw cycles and airborne chlorides in marine environments. In these types of applications, it is highly important to use materials and systems that have proven durability, ensure long service life and reduce maintenance costs. Sika provides an extensive range of solutions for the trackways, ensuring the required durability standards.

SUSTAINABILITY

In addition to durability, sustainability and environmental responsibilities are important components of the trackway superstructure construction. The environmental impact of such works is an increasingly important part of every project's pre-contract 'risk assessment' under the latest regulations.

SIKA ACTIVELY SUPPORTS
NUMEROUS GREEN PROJECTS ON
A GLOBAL, REGIONAL AND LOCAL
BASIS, WORKING TOGETHER TO
CREATE A MORE SUSTAINABLE
FUTURE WORLDWIDE.

The responsible use of our limited natural resources is essential for future generations. Therefore, the whole trackway superstructure refurbishment and new construction process should be considered in relation to the selection of materials which are sustainable and ecologically harmless. Sika strives for a more sustainable environment by optimizing their logistics, reducing energy consumption, reducing natural resources in their production processes and by developing innovative, solvent-free solutions to limit the release of VOC's (volatile organic compounds). Sika actively supports numerous green projects on a global, regional and local basis, working together to create a more sustainable future worldwide.



PROVEN QUALITY

LIFE CYCLE MANAGEMENT

Appropriate life cycle costing and management in all areas of crane trackway superstructure construction design, construction and management, including the correct maintenance, safeguards the owner's investment and maintains its capabilities and functions durably. Life cycle costing and management provides crane trackway superstructure owners with the best approach to minimize closure times and increase periods required between scheduled maintenance works, thereby achieving the lowest total cost over the full service life of the structure. Sika provides crane trackway superstructure owners and their maintenance managers the right design and planning tools, followed by thoroughly designed, proven, complete solutions and systems, to greatly increase the time between the necessary maintenance or repair cycles. This accounts for considerable savings in the overall defined life cycle costs, the bridge owner's and users' time, and delay and closure costs. Plus, it decreases the environmental impact of the bridge.

CERTIFIED QUALITY PROVIDES SECURITY

Before being released, the products of the Sika® Icosit® KC series must undergo extensive in-house testing using sophisticated equipment under realistic conditions. In addition to that, large-scale field tests are complemented by independent third-party testing facilities e.g. The Technical University of Munich, The University of Calgary/Canada, Technical University of Krakow, AEA Rail Technology in the UK, the University of Louvain/Belgium, Technical University of Dresden the University of Gyor/Hungary, and many others. German Railways (DB) ranking Sika as "Q1" = top quality supplier. Many other railway authorities also rely on the approved track fixing designs with flexible grouts of the Sika® Icosit® KC series.

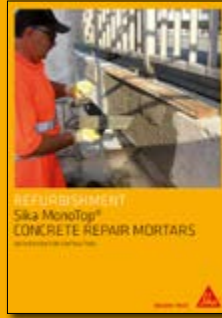
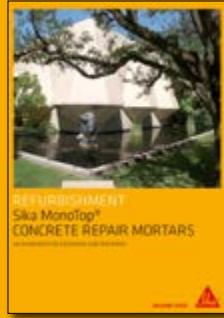
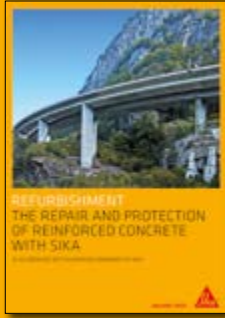
Among many other tests and references this long-term in-field experience shows the products quality particularly well: A perfectly intact 28 year old discrete/direct fixation with Sika® Icosit® KC grout was removed from Heinrichsheim bridge in Bavaria, subsequently from this the Technical University of Munich produced a load deflection (spring) diagram. A comparison with the corresponding diagram from the quality control at the time of installation in 1971 only showed a loss of flexibility of 6% (+/-10% production tolerance) after 28 years – proof of outstanding longevity!

SIKA – 100 YEARS OF EXPERIENCE

Sika has more than 50 years experience in the construction and refurbishment of all types of trackway structures. With renowned, thoroughly proven and innovative systems in a complete product range, Sika can provide trackway maintenance contractors and their customers with the appropriate solution for all types of projects. These include: concrete repair and protection, concrete technology, deck waterproofing, structural strengthening, watertight joint sealing, segmental bridge adhesive, high performance grouting and structural bonding solutions (rigid and elastic). Sika's depth of expertise comes from global experience, gained over a 100 years in the complex business of construction chemicals. Sika produces consistent quality-controlled products and systems, all supplied to site through efficient logistics. Overall it is our well trained Sika specialists who are key to our success in providing durable, cost efficient and effective construction solutions.



ALSO AVAILABLE FROM SIKA



FOR MORE INFORMATION ON SIKA STREETSCAPE SYSTEMS AND SOLUTIONS:



WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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