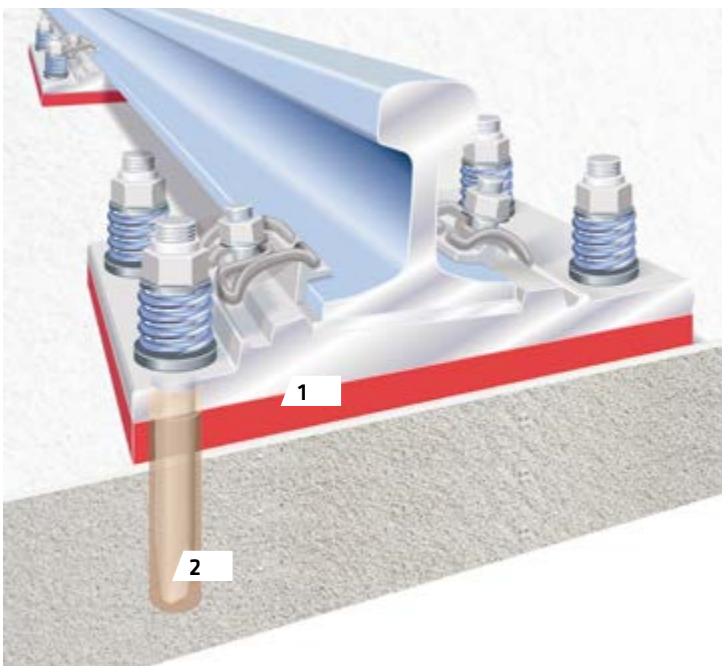




FLEXIBLE RAIL FIXING RAIL FIXING PU GROUTS FOR GANTRY CRANES

FLEXIBLE RAIL FIXING GROUTS FOR HEAVY GANTRY CRANES

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. heavy gantry cranes. On the **discrete fixation of rails** the single fixations will be fixed by anchor bolts and the steel baseplate is grouted with load bearing PU products (Sika® Icosit® KC)



BENEFITS OF Sika® Icosit® KC 330/340 PRODUCTS

- 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

1. Two-component polyurethane material Sika® Icosit® KC 330/10
2. Sika chemical anchoring products appropriately selected for the load and application conditions



Tracks for heavy gantry cranes can be exposed to extremely high wheel loads of more than 100 tons per wheel, with the maximum pressure in the product equal or lower than 15 MPa (service load). The tough elastic grades of the Sika® Icosit® KC products (Sika® Icosit® KC 330/10) used for these applications, has enough resistance against dynamic loads combined with such high wheel loads to avoid damage.

Tracks for heavy gantry cranes can be exposed to extreme high point loads per wheel often resulting in failure of rigid (e.g. cementitious, epoxy) grouts. Resilient, the tough elastic grades of the Sika® Icosit® KC series flex under point load, distributes the load over a wider surface area and consequently avoids any damage. Sika® Icosit® KC 330/10 product is a tough elastic, two-component polyurethane, polymer resin grout, it is designed as a vibration absorbing, load-bearing, flexible grout for discrete fixation of the crane rails. The Sika® Icosit® KC range has won worldwide renown for 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 crane 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.

ADVANTAGES

- Flexible, tough-elastic, dimensions tolerance-compensating
- Permanent fixation of the baseplate with the rail to the concrete or steel substrate
- Permanent rail alignment results in track geometry stability
- More uniform load distribution on the ground
- No corrosion of the baseplate and no erosion of concrete from water penetration
- A correct Shore D Hardness results in proper deflection level of the rail which ensures a reduction of mechanical wear on vehicles and rail
- Dampening and vibration mitigation
- Efficient Life Cycle Costs (LCC) of the track superstructure is ensured by long durability, and a low maintenance cost.



DURABILITY



Cranes 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 reduces maintenance costs. Sika provides an extensive range of solutions for the crane's trackways, ensuring the required durability standards.

SIKA STRIVES FOR
A MORE SUSTAINABLE
ENVIRONMENT
BY OPTIMIZING THEIR
LOGISTICS, REDUCING
ENERGY CONSUMPTION,
REDUCING NATURAL
RESOURCES IN THEIR
PRODUCTION PROCESSES

SUSTAINABILITY



In addition to durability, sustainability and environmental responsibilities are important components of crane 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. The responsible use of our limited natural resources is essential for future generations. Therefore, the whole crane 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.

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.



PROVEN QUALITY



CERTIFIED QUALITY PROVIDES SECURITY

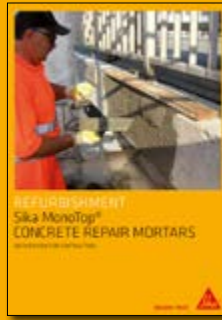
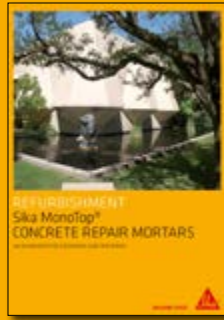
Before being released, the products of the Sika® Icosit® KC series must undergo extensive in-house testing using sophisticated equipment under realistic conditions. In addition to that, large-scale field tests are complemented by independent third-party testing facilities e.g. The Technical University 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 Győr/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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