



MORE **PERFORMANT**
MORE **SUSTAINABLE**

ENGINEERED REFURBISHMENT CONCRETE REPAIR MORTARS WITH REDUCED CARBON FOOTPRINT

Sika MonoTop®-1010, Sika MonoTop®-3020, Sika MonoTop®-4012

BUILDING TRUST





SIKA – YOUR RELIABLE PARTNER

Deterioration of concrete may happen due to corrosion, structural damage, water infiltration, freeze and thaw cycles, seismic activity, reactive aggregates, etc.

Years of research plus decades of practical experience have enabled Sika to develop a fully comprehensive Sika MonoTop® mortar solution to restore and rehabilitate concrete structures with reduced carbon footprint. Sika customer advice and support is second to none, from concept to successful completion on site. This is all based on more than 100 years of experience on large and small projects all over the world.

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MORE PERFORMANT MORE SUSTAINABLE

SIKA – ENHANCING CUSTOMER VALUE AND REDUCING ENVIRONMENTAL IMPACTS

One of our key pillars is Enhancing Customer Value and Reducing Environmental Impacts. Our goal is to provide the most innovative and effective solutions with reduced environmental impacts to fulfill all the technical needs of the projects and at the same time protect and respect our commitment of keeping our impact to the environment as low as possible.



Aiming this goal, Sika has been developing the **Sustainability Portfolio Management (SPM)** Methodology. It is the mechanism used by Sika in order

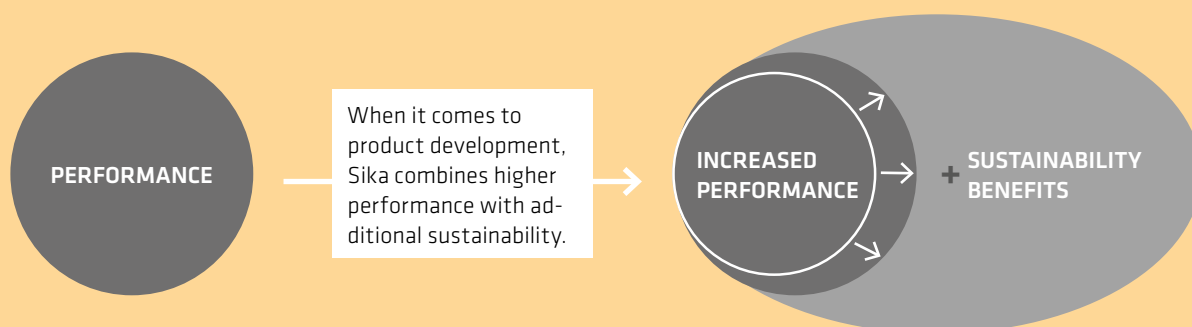
to evaluate and classify its products in terms of both Performance and Sustainability. The objective of Sika's SPM approach is to manage innovation

and sustainability, minimizing the risks and maximizing the opportunities associated with our products.



The outcome of the SPM is a portfolio of “Sustainable Solutions” – products with combined significant Sustainability and Performance benefits.

INNOVATION – STRONGER FOCUS ON PRODUCT SUSTAINABILITY



SUSTAINABILITY PORTFOLIO MANAGEMENT (SPM)

Assessment according to comprehensive sustainability and performance categories

Sika's Sustainability Portfolio Management methodology evaluates each solution under performance categories and sustainability categories to evaluate the optimum combination of both essential aspects of a product. The categories are comprehensive and cover technical and sustainability topics essential to Sika. Upon completion of the SPM assessment, products are assigned a final performance and sustainability rating. Only products which demonstrate significant performance and sustainability benefits can qualify as Sustainable Solutions.

SUSTAINABILITY CATEGORIES

Products which are assessed under the SPM methodology undergo an evaluation against 12 Sustainability Categories, ensuring that Sika Sustainable Solutions are following our commitment to the environment.



1 | **SUPPLIER CODE OF CONDUCT**
Sharing values for more success

5 | **AIR QUALITY AND EMISSIONS**
Products that promote good air quality and minimize emissions.

9 | **RESOURCES**
Efficient use of precious resources.

2 | **RISKS**
Addressing current and future reputational and business risks.

6 | **HEALTH AND SAFETY**
Healthy and safe to use

10 | **PACKAGING**
Prioritizing the use of responsible packaging for products.

3 | **CHEMICAL HAZARD AND EXPOSURE**
Addressing and eliminating chemical hazards and exposure.

7 | **ENERGY**
Products that promote energy efficiency principles.

11 | **GREEN BUILDING STANDARDS**
Products that contribute to world-renowned Green Building Standards.

4 | **REGULATORY TRENDS**
Alliging product developments with regulatory trends.

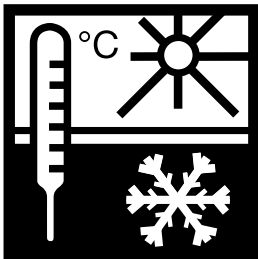
8 | **CLIMATE**
Products that minimize the impact on the climate.

12 | **COST SAVINGS DOWNSTREAM**
Helping customers to directly, measurable and significantly reduce costs during application/use.

PERFORMANCE CATEGORIES

Products which are assessed under the SPM methodology undergo an evaluation against 6 Performance categories, ensuring that our Sustainable Solutions are fit for purpose.

1



TECHNICAL PERFORMANCE

This category includes the achievements of selected and relevant technical objectives.

2



EASE OF APPLICATION

This category rates the product's convenience and the ease of use.

3



DURABILITY

This essential category indicates the products that prove test of time.

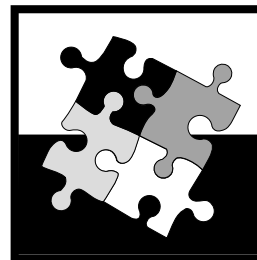
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AESTHETICS

This category evaluates how pleasant the appearance and what effect has the product.

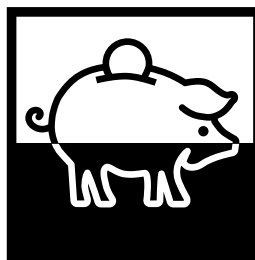
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SYSTEM CONFORMITY

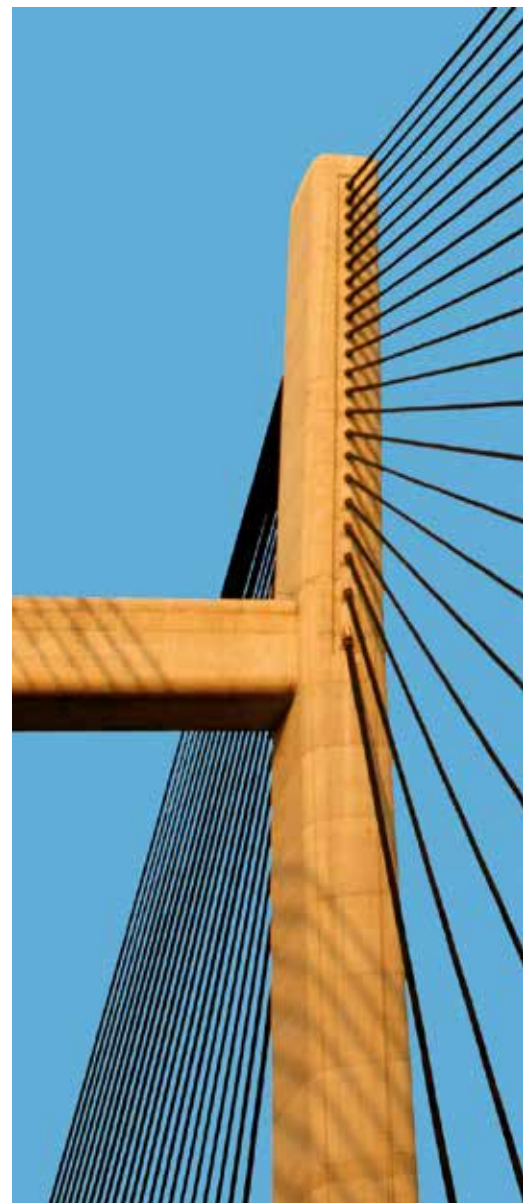
This category indicates the compatibility of the product with other system components.

6



COST BENEFITS

This category evaluates the effectiveness cost wise of the product.



CONCRETE REPAIR MORTARS WITH REDUCED CARBON FOOTPRINT

Sika Monotop® concrete repair mortar range: more performant, more sustainable



SIKA HAS DEVELOPED A UNIQUE TECHNOLOGY THAT ALLOWS US TO OFFER INNOVATIVE AND DURABLE CONCRETE REPAIR MORTARS WITH A REDUCED CARBON FOOTPRINT

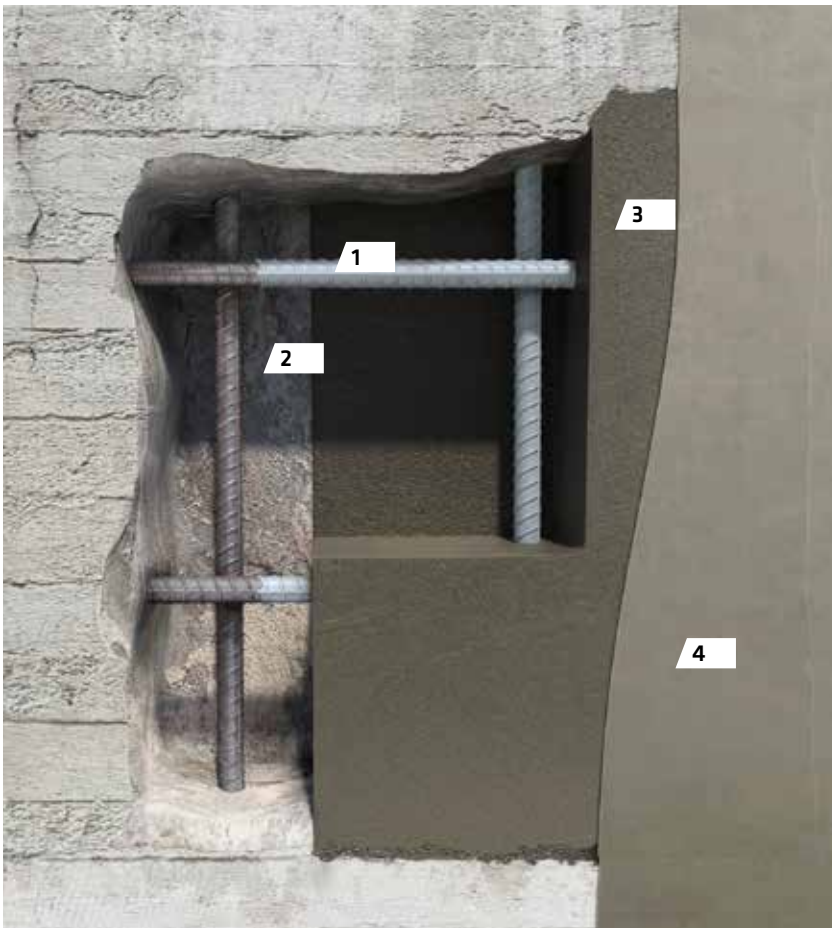
This new Sika MonoTop® concrete repair mortar range was developed after years of research and is formulated to achieve a long lasting service life in all the remedial works of damaged concrete due to corrosion, structural damages, water infiltration, freeze and thaw cycles, seismic activity, reactive aggregates, etc. The range forms a complete

system that will allow you to maximize the durability of your structure while minimizing the resources used.

The complete range has the following products:

- Sika MonoTop®-1010, bonding primer and reinforcement corrosion protection slurry
- Sika MonoTop®-4012, concrete repair mortar
- Sika MonoTop®-3020, pore sealer and levelling mortar

Sika MonoTop® REDUCED CARBON FOOTPRINT CONCRETE REPAIR MORTAR SYSTEM



1

Reinforcement Corrosion Protection Sika MonoTop®-1010

- To prevent further corrosion of steel reinforcement

2

Bonding Primer Sika MonoTop®-1010

- To promote adhesion of the repair mortar on demanding substrates

3

Repair Mortar Sika MonoTop®-4012

- To repair concrete defects
- To restore structural integrity
- To improve durability
- To improve appearance
- To extend the structure's design life

4

Pore Sealer / Levelling Mortar Sika MonoTop®-3020

- To restore durability
- To restore aesthetic appearance
- To restore geometric appearance
- To provide a surface for over-coating

Sika MonoTop®-1010

High performing and sustainable bonding primer and corrosion protection slurry

This innovative product was designed with an optimized formulation containing recycled waste materials, leading to the following key features:

KEY ADVANTAGES

OUTSTANDING CORROSION PROTECTION PROPERTIES

**SUITABLE AS PRIMER FOR
REPAIRS UNDER LIVE DYNAMIC
LOADS**

**LOW CARBON FOOTPRINT:
MEETS LEED V4 REQUIRE-
MENTS**



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DURABILITY – CORROSION INHIBITORS

Sika MonoTop®-1010 has a combination of corrosion inhibitors that result in an outstanding resistance against water vapor and chloride penetration to enhance the protection of the steel rebars, even in aggressive marine environments. This fact is measured with the diffusion resistance coefficients to water vapor and to carbon dioxide which show an improvement of ~30% compared to an equivalent cementitious slurry.

TECHNICAL PERFORMANCE – EXCELLENT ADHESION

Sika MonoTop®-1010 not only acts as corrosion inhibitor, but also enhances the adhesion of the repair mortars to the existing substrate. It achieves great adhesion and it is the primer to use in extreme application conditions, e.g. under live dynamic loads.

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CLIMATE: REDUCED CARBON FOOTPRINT

Sika MonoTop®-1010 has a reduced carbon footprint as a result of the replacement of Portland cement with fly ash within its formulation. When compared to a reference cementitious concrete repair mortar, Sika MonoTop®-1010 shows an approx. 25% reduction in Global Warming Potential (GWP). This corresponds to approx. 3.5 kg of CO₂ saved per 25 kg bag of mortar.

GREEN BUILDING: MEETS LEED V4 REQUIREMENTS

Sika MonoTop®-1010 is part of the Sika LEED product portfolio and conforms on three LEED v4 credit requirements, thus directly contributing to the attainment of 3 points. More details about the individual credit fulfillment are given in the Sika LEED Attestations.



Sika MonoTop[®]-4012

High performing and sustainable structural and non-structural concrete repair mortar

This structural concrete repair mortar offers unique advantages compared to an equivalent concrete repair mortar.

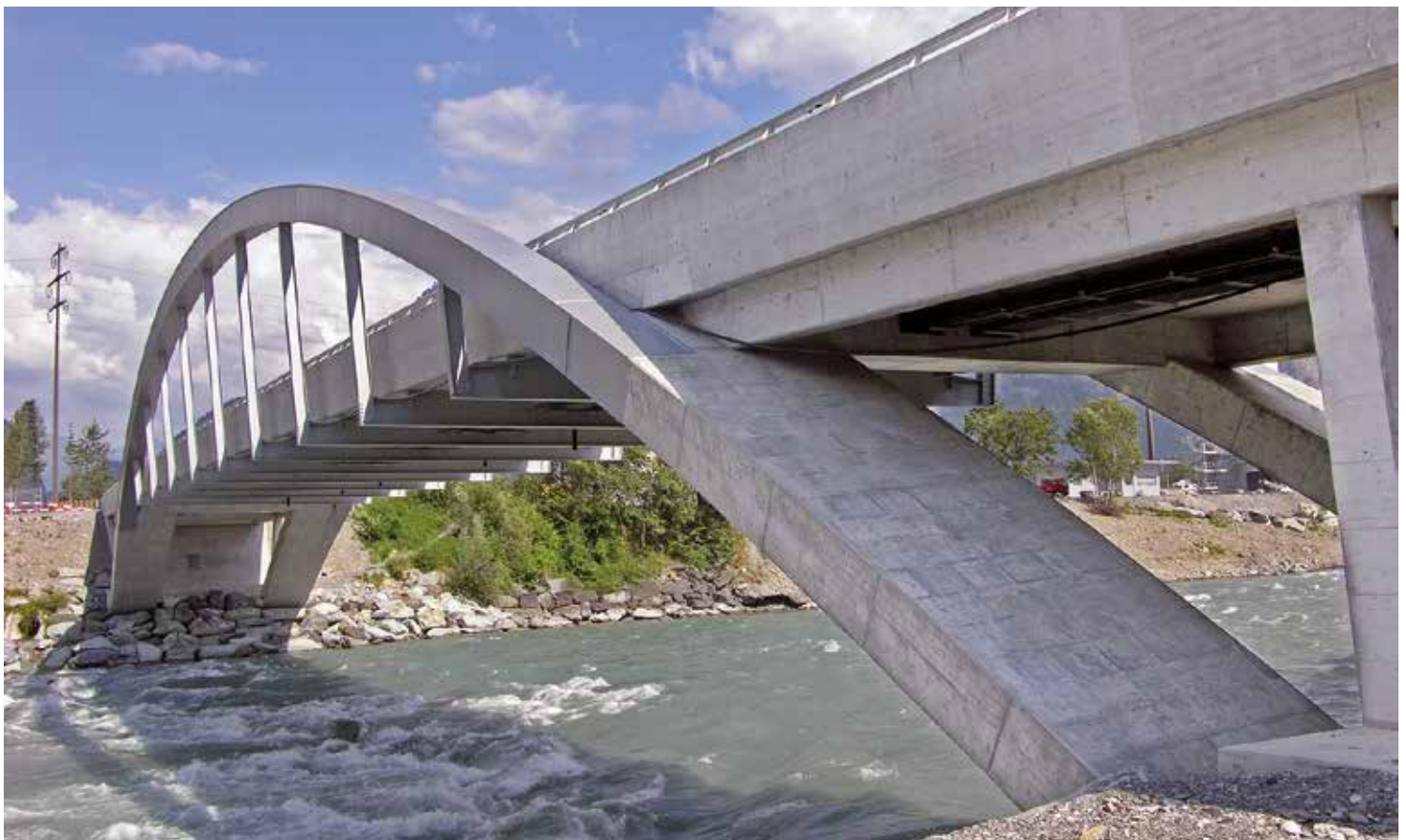
KEY ADVANTAGES

HIGH APPLICATION THICKNESS IN ONE LAYER, UP TO 120 MM

SUITABLE FOR REPAIRS UNDER LIVE DYNAMIC LOADS

**LOW CARBON FOOTPRINT:
LEED ATTESTATION AVAILABLE**

REDUCED DUST FORMATION



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COST EFFECTIVE CONCRETE REPAIR SOLUTION

Sika MonoTop®-4012's unique formulation allows the application of up to 120 mm in one layer avoiding unnecessary waiting times between layer and saving labour work. This is possible even when hand applied, although it can also be mechanically sprayed. It is suitable for indoor and outdoor vertical, overhead and horizontal areas.

TECHNICAL PERFORMANCES – REPAIRS UNDER LIVE DYNAMIC LOADS

Sika MonoTop®-4012 is suitable for structural and non-structural repairs achieving the maximum class R4 according the European standard EN 1504-3. This concrete repair mortar showed outstanding technical performances when passing the test for repairs applied under dynamic loads according to the "Guideline for the Protection and Restoration of Concrete Building Components issued by the German Committee for Reinforced Concrete (DAfStb).

DURABLE SOLUTION EVEN IN HARSH ENVIRONMENTS

Sika MonoTop®-4012 was formulated with the right combination of cements and aggregates to achieve resistance to sulphates and sea water, allowing this mortar to be used even in harsh environments like marine or industrial.

MORE SUSTAINABLE

CLIMATE: REDUCED CARBON FOOTPRINT

Sika MonoTop®-4012 has a reduced carbon footprint as a result of the replacement of Portland cement with fly ash within its formulation. When compared to a reference cementitious concrete repair mortar, Sika MonoTop®-4012 shows an approx. 15% reduction in Global Warming Potential (GWP). This corresponds to approx. 1.5 kg of CO₂ saved per 25 kg bag of mortar.

AIR QUALITY AND EMISSIONS: REDUCED DUST FORMATION

Sika MonoTop®-4012 shows a heavily reduced dust formation (approx. 70%) compared to a reference cementitious concrete repair mortar based upon suitable scientifically internal laboratory test and is amongst the best-in-class solutions in the market with regards to its dust reduction level.

GREEN BUILDING: MEETS LEED V4 REQUIREMENTS

Sika MonoTop®-4012 is part of the Sika LEED product portfolio and conforms on three LEED v4 credit requirements, thus directly contributing to the attainment of 3 points. More details about the individual credit fulfillment are given in the Sika LEED Attestations.



Sika MonoTop[®]-3020

High performing and sustainable structural and non-structural smoothing and levelling concrete repair mortar

This smoothing and levelling mortar was developed to achieve the highest performances with the minimum application effort, limiting the contingencies on site.

KEY ADVANTAGES

LOW CRACK BEHAVIOUR

OUTSTANDING FINISHING

HIGH PROTECTION AGAINST CO₂ INGRESS

LOW CARBON FOOTPRINT

REDUCED DUST FORMATION



Before remedial works.



After remedial works.

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TECHNICAL PERFORMANCES – STRUCTURAL REPAIRS

Sika MonoTop®-3020 is suitable for structural and non-structural repairs obtaining a repair class R3 according to the European standard EN 1504-3.

The mortar was formulated with the right combination of cements and aggregates to achieve resistance to sulphates and sea water, allowing this mortar to be used even in harsh environments like marine or industrial.

DURABLE – NO CRACKING

Sika MonoTop®-3020 was formulated to achieve a non-cracking finishing enhancing therefore the durability of the repair. This essential characteristic increases the life span of the structure.

AESTHETIC – NO NEED TO USE A COATING AFTERWARDS

Sika MonoTop®-3020 leaves a smooth finishing due to the selected grain curve used during the production of the mortar. This surface can be left exposed to the environment without the need of any additional finishing coating. .

MORE SUSTAINABLE

CLIMATE: REDUCED CARBON FOOTPRINT

Sika MonoTop®-3020 has a reduced carbon footprint as a result of the replacement of Portland cement with fly ash within its formulation. When compared to a reference cementitious concrete repair mortar, Sika MonoTop®-3020 shows an approx. 15% reduction in Global Warming Potential (GWP). This corresponds to approx. 1.5 kg of CO₂ saved per 25 kg bag of mortar.

AIR QUALITY AND EMISSIONS: REDUCED DUST FORMATION

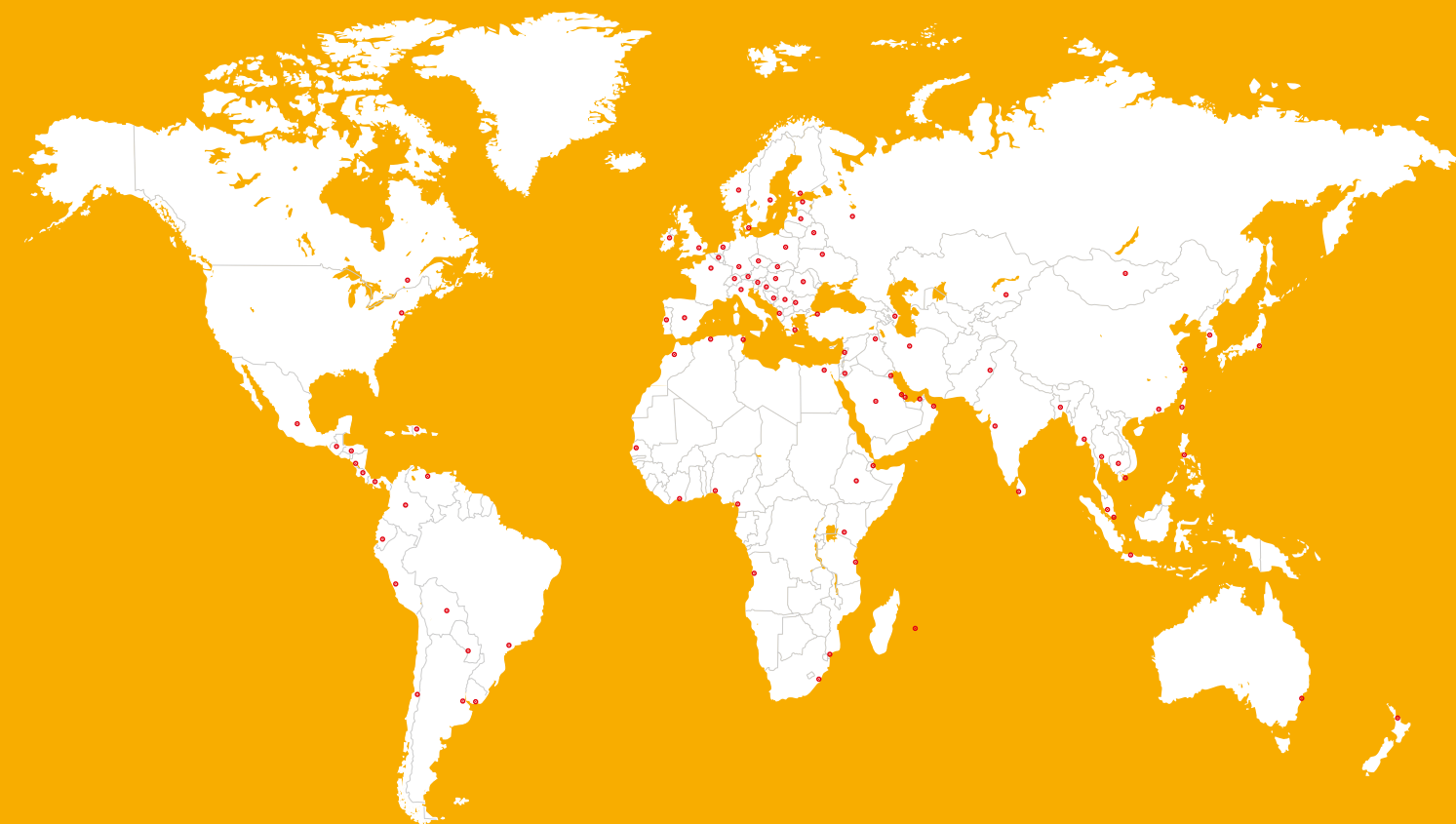
Sika MonoTop®-3020 shows a significantly reduced dust formation (approx. 44%) compared to a reference cementitious concrete repair mortar based upon suitable scientifically internal laboratory test.

GREEN BUILDING: MEETS LEED V4 REQUIREMENTS

Sika MonoTop®-3020 is part of the Sika LEED product portfolio and conforms on three LEED v4 credit requirements, thus directly contributing to the attainment of 3 points. More details about the individual credit fulfillment are given in the Sika LEED Attestations.



GLOBAL BUT LOCAL PARTNERSHIP



FOR MORE ENGINEERED REFURBISHMENT INFORMATION:



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, industrial 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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