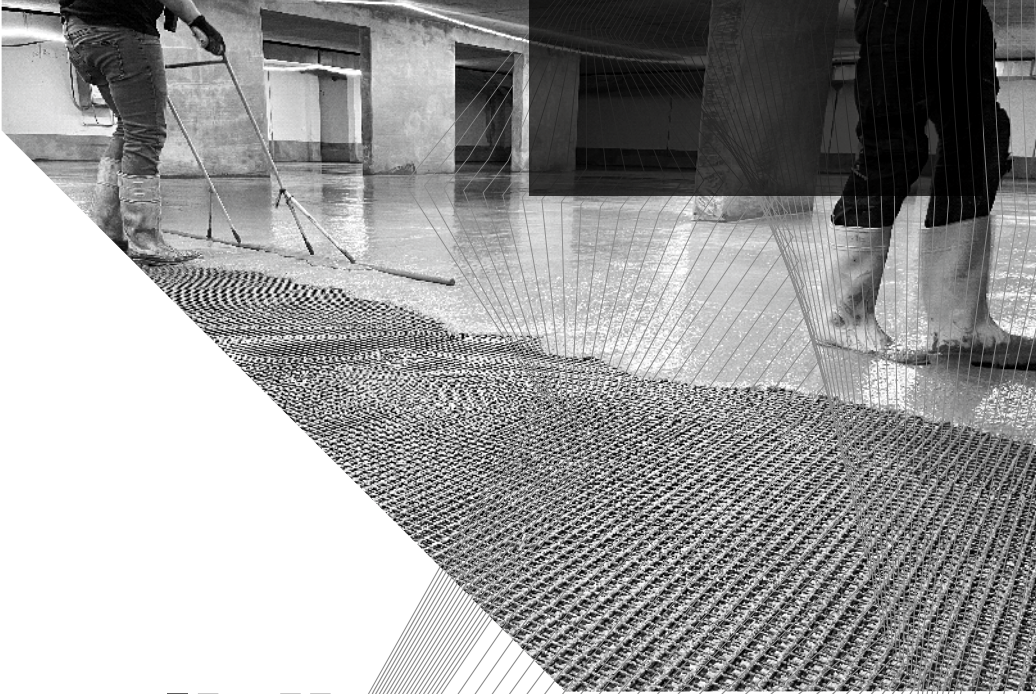


**solidian•kelteks**



# **solidian** RESTORATION

Concrete repair &  
strengthening with  
non-metallic reinforcement

[solidian-kelteks.com](http://solidian-kelteks.com)



# Corrosion free & guaranteed durability of 100 years

## Sewage & Water structures

- solidian Carbon Grid Reinforcements are officially approved for exposure classes up to XC3, XD3, and XS3 and can be used without restrictions.
- In accordance with the mortar tests of DIN 19573, we have also tested our carbon grid reinforcements. The results confirm: They are completely resistant to acids and sulfates. They meet the requirements for biogenic sulfuric acid corrosion resistance for the new XWW4 class.

### Crack-Width Limiting Properties of solidian ANTICRACK:

- Protects concrete and mortar from the ingress of harmful substances/acids.
- Ideal for water-impermeable (WU) components and sealing structures against water-hazardous substances (LAU and JSG systems).
- Enables the use of mechanically robust and cost-effective OS8 systems instead of crack-bridging OS10 to OS14 systems.

## Strengthening of the building structure

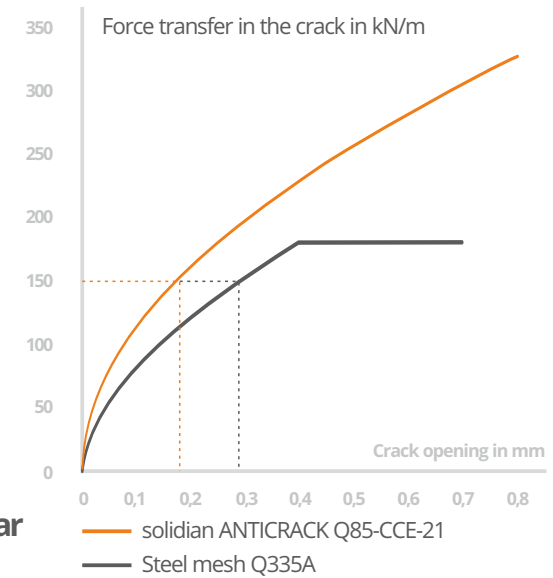
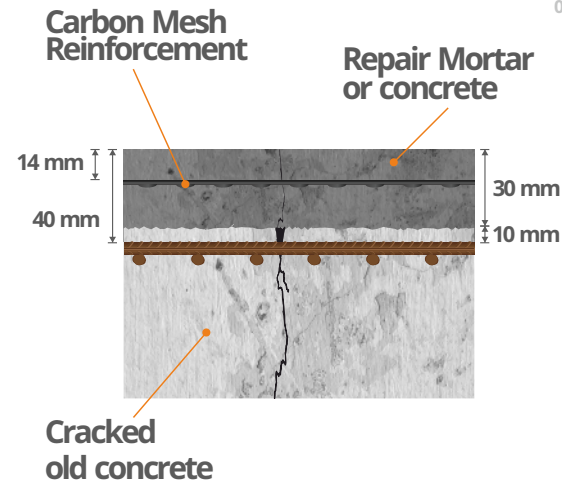
- Strengthen your reinforced concrete structure with the Germany-approved CARBOreft® method to restore or increase its load-bearing capacity.
- With our European-approved CRM system, based on EAD 340392-00-0104, you can reinforce concrete and masonry structures using high-performance grid and anchoring solutions.

### Minimal additional layer thickness

- Preservation of clear room height / clearance height
- Protection against further corrosion with only minimal additional self-weight
- Existing structures can be given a new appearance while being preserved, protected, and strengthened
- Beneficial for meeting heritage preservation requirements

## In General...

- By repairing with a carbon concrete layer, the load-bearing capacity can be restored and increased and/or the usability ensured
- Carbon fiber grid reinforcement ensures a higher durability of the component
- Cost savings through less material usage and thus lower CO<sub>2</sub> emissions
- By implementing thinner layers, the clear room height or passage height can be maintained



solidian ANTICRACK Q85-CCE-21 shows superior crack width limitation compared to a Q335A reinforcing steel mesh and can also be installed very close to the surface due to its corrosion resistance.

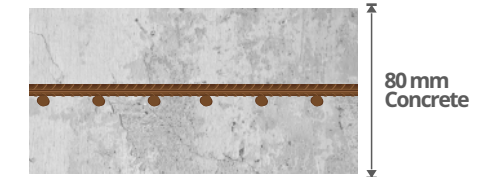
## Cathodic corrosion protection

- Carbon reinforcements can serve as a conductive anode and be used as an alternative to titanium anodes as part of cathodic corrosion protection

## Logistics & Transportation

- Simple and easy processing of our grid reinforcement either in mat form or as roll material
- Roll material offers you advantages: individual cutting, low material usage due to less waste and overlapping, simpler logistics, lower transport costs, faster and easier installation and thus lower personnel costs, faster recommissioning of the repaired structure
- The rollability of the reinforcement makes it ideally suited for use in difficult and/or confined spaces, such as canals, shafts, overhead work

### Steel Reinforcement



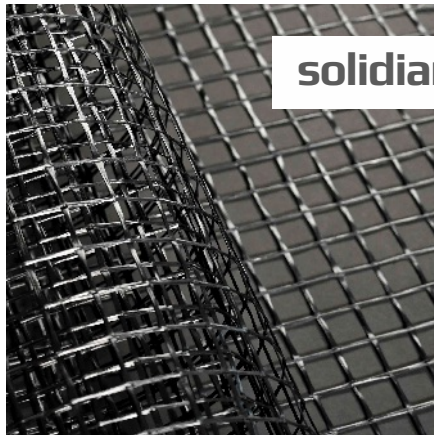
### Carbon Reinforcement





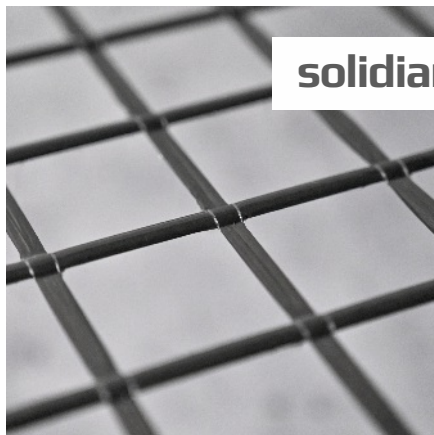
## solidian ANTICRACK

- Reinforcement for concrete layers Increase the mechanical resistance of the concrete surface
- Surface protection system (only OS8 instead of OS10 or OS11)
- Execution of sealing surfaces and waterproofing
- Reprofling
- Cross-section supplementation
- Maximum crack width limitation
- Maximum compound



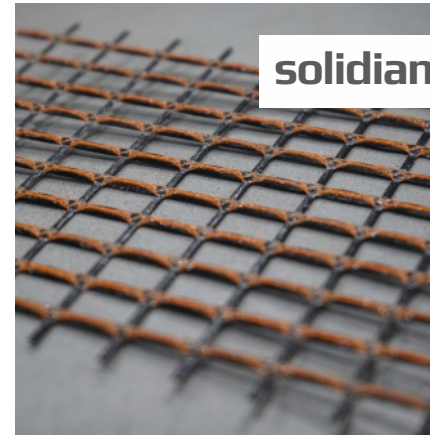
## solidian eGRID

- Cathodic corrosion protection (CCP)
- Replacement of titanium anodes as part of a remediation system
- Uniform surface introduction of protective currents



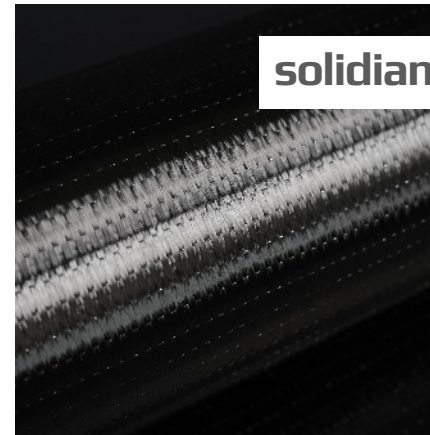
## solidian GRID

- Reinforcement for concrete layers
- Reprofling
- Cross-section supplementation
- Good crack width limitation
- Approved product for the reinforcement of concrete (new construction)
- Planning according to DAfStb guideline



## solidian GRID CarboRefit

- Procedure for reinforcing the supporting structure of concrete components with carbon concrete
- Restoration and/or increase of load-bearing capacity and durability
- Preservation of the existing appearance of historical buildings with monument protection
- Approval Z-31.10-182 (abZ/aBG)
- Lowest reinforcement thickness, e.g. compared to sprayed concrete additions
- Low additional dead weight
- FRILO design module



## solidian WRAP

- Textile fabric made of carbon fibers
- As a subcomponent of a complete system
- Can be used with a suitable resin, e.g. for binding columns or other components to be reinforced



## solidian ANTISEISMIC Grid

- System solution for earthquake and component strengthening
- Strengthening for masonry and concrete structures
- CRM system
- ETA-23/0383
- System components L-connectors, open-end connectors, corner

# Complete non-corrosive earthquake reinforcement developed by experts



## CRM System

Strengthens new and existing masonry and concrete elements by increasing strength, ductility, and load-bearing capacity with the combination of grid, corner and connector.

CE marked under the EAD 340392-00-0104 CRM

## FRCM System

Combines an anorganic matrix (cement or lime) with reinforcement grids (made out of carbon, basalt or AR glass) and connector for improved structural integrity under static and dynamic loads.

## FRP System

Uses lightweight, high-strength materials to absorb tensile stresses and ensure a strong bond with reinforced elements.

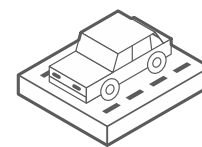
# Resilience you can rely on

solidian ANTISEISMIC System is engineered for the renovation, restoration, and reinforcement of masonry and concrete structures. It provides optimal protection against seismic damage by enhancing structural strength, ductility, and load-bearing capacity.

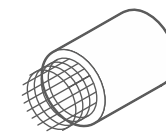
## Key Benefits

- Strengthens structural elements to resist seismic forces
- Increases ductility and load distribution
- Offers flexible and rigid reinforcement options for varied applications
- Lightweight, non-corrosive, and easy to install

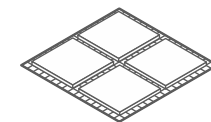
Our innovative R&D ensures reliable and high-quality solutions tailored to earthquake resistance. Using cutting-edge materials like carbon, AR glass, and basalt, the system delivers superior performance while maintaining easy installation and long-term durability.



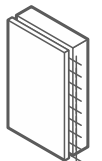
Underground & Parking Garages



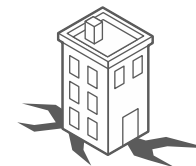
Sewage Systems, Locks And Canals



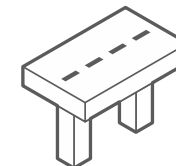
Floors & Tiles



Facades



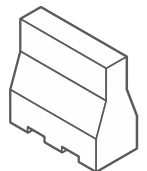
Seismic Retrofitting



Bridges



Silos & Containers



Retaining Walls



German national technical approval (abZ) and general construction technique permit (aBG) for solidian GRID



We offer an environmental product declaration (EPD) for solidian GRID and solidian REBAR.



We offer you a solution with a partner who recycles all carbon reinforcements.

# We are a member **CARBOrefit**<sup>®</sup>

**CARBOrefit**<sup>®</sup> is a general building approval for reinforcement with carbon concrete. It offers a sustainable and resource-saving solution for securing existing structures and increasing the load-bearing capacity and longevity of buildings. Thanks to this approval,

**CARBOrefit**<sup>®</sup> can be used efficiently, cost-effectively and in a variety of ways. It thus supports the achievement of climate targets in the construction industry and helps to leave an intact environment for future generations.

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## solidian · kelteks

