SikaWrap® Hex
Now CodeMarked

CODEMARK™

STRUCTURAL STRENGTHENING
Sika CarboDur® & SikaWrap®

BUILDING TRUST

STRUCTURAL STRENGTHENING WITH Sika CarboDur® and SikaWrap® COMPOSITE SYSTEMS

REASONS FOR STRENGTHENING

- Durability problems due to poor or inappropriate construction materials
- Inadequate design or construction
- Aggressive environments not properly understood during the design stages
- Increased loading requirements due to changes of policy or use of structures
- Increased life-span requirements made on ageing infrastructure
- Exceptional or accidental loading

MATERIALS USED

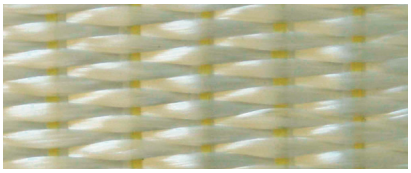
FRP Fabrics

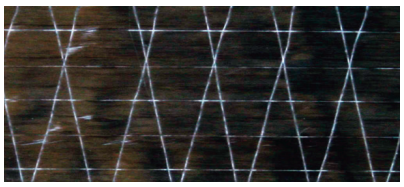
Uni and bi-directional fabrics with carbon, glass and aramid fibres. Mostly used for seismic retrofitting and shear strengthening.

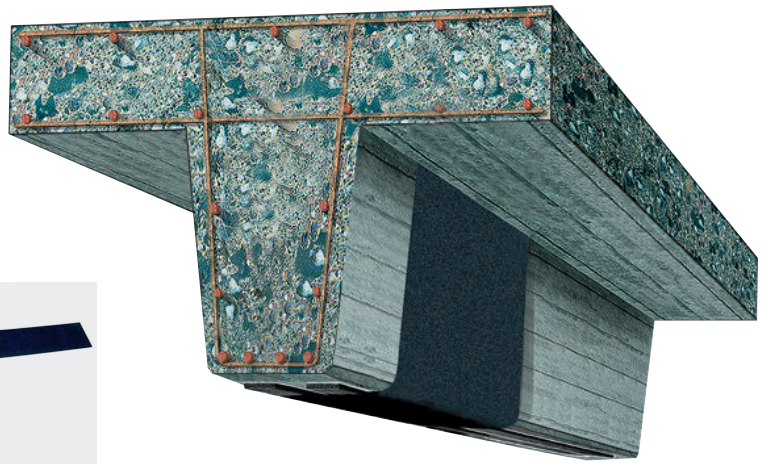
SikaWrap® Hex
NOW CODEMARKED

The SikaWrap Hex structural strengthening system is now CodeMarked, certificate of conformity number AQ-000214-CMNZ

CODEMARK™

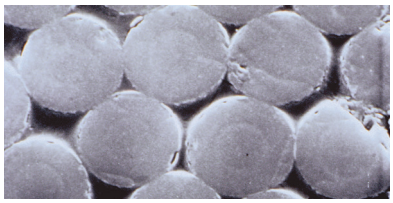




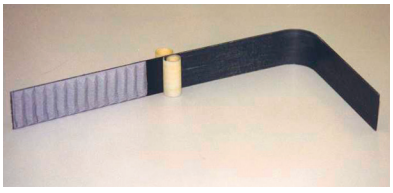


CFRP Plates

Carbon fibre reinforced plates produced by pultrusion process with precise material properties. Mostly used for flexural strengthening of dynamic and static loaded structures such as bridges, beams, ceilings or walls.



Carbon Fibres in CFRP Plates
Magnification 1:2000
Fibre volume content > 70%

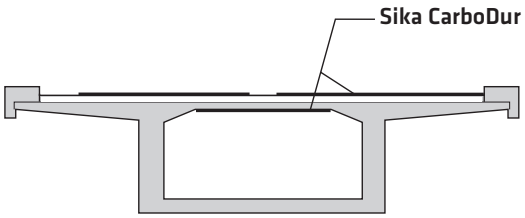


Sika CarboShear L
L-shaped carbon fibre link used as externally bonded shear reinforcement. Mostly used for shear reinforcement of T-beams and as an anchoring tool for CFRP plates.

SIKA SYSTEMS

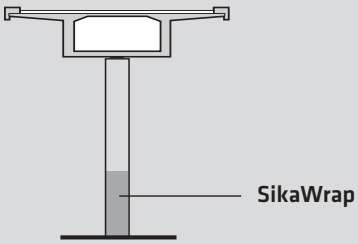
FLEXURAL STRENGTHENING WITH:

- **Sika CarboDur** CFRP plates
- **Sika CarboHeater,** heating device for rapid application
- **Sika CarboDur** prestressed CFRP plates
- **SikaWrap** FRP fabrics



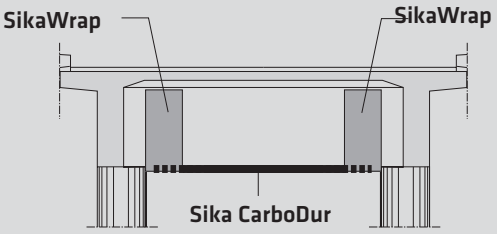
SEISMIC RETROFITTING WITH:

- **SikaWrap** FRP fabrics



SHEAR STRENGTHENING WITH:

- **Sika CarboShear L** CFRP plates
- **SikaWrap** FRP fabrics



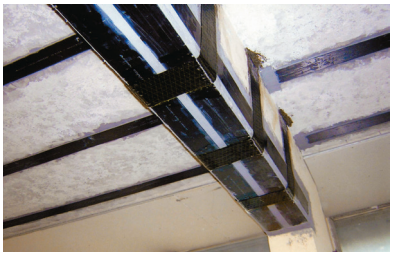
UPGRADING OF EXISTING CIVIL ENGINEERING INFRASTRUCTURE USING SIKA STRUCTURAL STRENGTHENING SYSTEMS

COLUMNS/POLES

BRIDGE DECKS

SILOS/CHIMNEYS/TOWERS

BEAMS/GIRDERS



PARKING STRUCTURES

BUILDINGS

STRUCTURAL STRENGTHENING
Sika® CarboDur® & SikaWrap®

CFRP PLATES - SYSTEM COMPONENTS

Sika® CarboDur® CFRP plates		**Type S**	**Type M**	
	Elastic modulus:	165 ,000 N/mm²	210 ,000 N/mm²	
	Tensile strength:	2,800 N/mm²	2,900 N/mm²	
Sika® Prestressing Systems	Prestressing of **Sika® CarboDur®** plates with **Sika® CarboStress** prestressing system.			
Sika® CarboHeater Heating device	Fast application (2 – 3 hrs) of **Sika® CarboDur®** plates			
Sika® CarboShear® L-shaped CFRP plates	**L Min. tensile load:**	126 kN/40 mm width		
	Elastic modulus:	150 ,000 N/mm²		
Sikadur® Epoxy adhesives and mortars	**Sikadur® Product:**	**Sikadur®-30**	**Sikadur®-30 LP**	**Sikadur®-41 CFN**
	Application temperature:	8 – 35 °C	25 – 55 °C	10 – 30 °C
	Elastic modulus:	11,200 N/mm²	10 ,000 N/mm²	9,000 N/mm²
	Bond strength:	> 4 N/mm² (concrete failure)	> 4 N/mm² (concrete failure)	> 4 N/mm² (concrete failure)
	Use:	Plate adhesive	Plate adhesive	Repair mortar

FRP FABRICS - SYSTEM COMPONENTS

SikaWrap® FRP Fabrics	Several types of **SikaWrap®** FRP fabrics are available to meet the requirement of specifier and contractor. Uni-directional woven and non-woven fabrics made of glass, aramid and different types of carbon fibres are available. Bi-directional types can be offered with carbon and glass fibres. The range of areal weight is between 200 and 600 g/m² for carbon, 400 to 1,000 g/m² for glass and 300 to 600 g/m² for aramid fibre fabrics. Further possibilities and fibre combinations are available on request.
Sikadur® Epoxy impregnating resins	All **SikaWrap®** fabrics can be impregnated with the system tested **Sikadur®** impregnating resins that are all suited for the most common substrate types.

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Scan QR Code for further Sika FRP composite system information

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