

Sika® CarboDur® Composite Strengthening System

Construction

System Description

High Performance CFRP – Plate and Fabric Strengthening Systems:
 The **Sika® CarboDur® Composite Strengthening Systems** are structural strengthening systems comprising of high performance corrosion resistant materials.

- Pultruded carbon fiber plates of various width, thickness and modulus
- Woven and Non-Woven fabrics with different fiber types, and area weights
- Specially formulated reaction cured two part structural adhesives and resins

For detailed product information consult the individual Product Data Sheet!

System Information

OVERVIEW

System Structure

Note: The system configuration as described must be fully complied with and may not be changed.

CFRP Plates System Parts

Main areas of application:

- Flexural Strengthening
- Shear Strengthening
- Seismic Upgrading and Retrofitting
- Masonry Strengthening
- Pre-stressing



Sika® CarboDur® Plates:
 (and Sikadur®-30 adhesives)

Grades of E-Modulus	160'000-300'000 N/mm ² (3 types)
Grades of strength	1300-2800 N/mm ² (5 types)
Width	50-150 mm
Thickness	1.2 / 1.4 mm



Sika® CarboShear® L
 (and Sikadur®-30, Sika® AnchorFix®-3 adhesives)

Bracket Leg Lengths	20/50, 30/70, 50/100 cm
Width	40 mm
Thickness	1.4 mm (nominal)



Sikadur®-30 structural adhesives

Sikadur®-30 Two part epoxy adhesive for normal application temperatures
Sikadur®-30LP For higher application and service temperatures



Sika® CarboHeater

Heating device for fast curing of the SikaDur structural adhesives
For applications at low temperature and for achieving elevated service temperatures



Sika® pre-stressing systems

Sika® LEOBA - CarboDur® (Sika® LC): for use near the structures surface with 170 - 220kN prestressing force
Sika® StressHead: for controlled quality of end-anchorage with up to 220 kN pre-stressing force



SikaWrap® Fabric System

Main areas of application:

- Shear Strengthening
- Masonry Strengthening
- Column Strengthening
- Seismic Upgrading and Retrofitting
- Flexural Strengthening
- Impact protection
- Blast protection / reduction



SikaWrap®: Glass, Aramid, Carbon Fabrics (and Sikadur®-330 / Sikadur®-300 resins)

Grades of Young's Modulus dependent on the fiber type	76 - 640 GPa
Grades of strength dependent on the fiber type	2300 - 4900 MPa
Roll length / width	50 m / 300 and 600 mm
Area weight	200 - 950 g/m ²
Thickness dependent on the area weight	0.11 - 0.36 mm



Sikadur® Impregnation Resins

Sikadur®-330 for the dry application method (area weight < 300-450 g/m ²)
Sikadur®-300 for the wet application method (area weight > 300 g/m ² and Non-Woven fabrics)



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Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request



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