KREVO
Exploring Chemistry

KREVO Carbon Strip

High-Strength pultruded CFRP strengthening strip | HS, IM and HM grades |

PRODUCT DESCRIPTION

KREVO Carbon Strip is a black, pultruded carbon-fiber-reinforced polymer (CFRP) strip for externally bonded structural strengthening. When bonded using a compatible high-performance epoxy adhesive, the strip is intended to resist tensile, shear and impact demands where supported by structural design. The range includes high-strength (HS), intermediate-modulus (IM) and high-modulus (HM) grades.

ADVANTAGES

- Lightweight system with a high strength-to-weight ratio and fast installation.
- Available in high-strength, intermediate-modulus and high-modulus grades.
- Multiple standard strip widths and nominal thicknesses suit varied designs.
- Suitable for straight surfaces and selected curved details subject to design approval.
- Can be combined with compatible CFRP reinforcing rods where specified.

TYPICAL USES

Beams and slabs • Walls and columns • Culverts • Curved and complex structural details • External tensile and flexural strengthening of reinforced concrete members.

PRODUCT INFORMATION

PARAMETER	SPECIFICATION
Material type	Pultruded carbon-fiber-reinforced polymer (CFRP) strip / plate
Colour	Black
Available grades	HS - High Strength | IM - Intermediate Modulus | HM - High Modulus
HS strip thicknesses	HS 1200: 1.2 mm | HS 1400: 1.4 mm
IM strip thickness	IM 1200: 1.2 mm
HM strip thicknesses	HM 1200: 1.2 mm | HM 1400: 1.4 mm
Standard widths	HS 1200: 20, 50, 60, 80, 100, 120, 150 mm; HS 1400: 50, 60, 80, 90, 120 mm; IM 1200: 50, 60, 80, 90, 100, 120 mm; HM 1200/1400: 50, 80, 120 mm
Supply / storage / shelf life	100 m rolls; dry and shaded storage; no specified shelf-life limit under these conditions

TECHNICAL PERFORMANCE SPECIFICATION | HS / IM / HM GRADES

PROPERTY	SPECIFIED VALUE BY GRADE
Carbon fiber content	HS >68% | IM >68% | HM >68%
Nominal thickness	HS 1.2/1.4 mm | IM 1.2 mm | HM 1.2/1.4 mm
Modulus of elasticity	HS >165 GPa | IM >210 GPa | HM >400 GPa
Tensile strength	HS >3,000 MPa | IM >2,400 MPa | HM >1,500 MPa

Application & System Data

KREVO Carbon Strip | Bond-line thickness, substrate preparation and installation requirements

APPLICATION PROPERTIES

PARAMETER	REQUIREMENT	APPLICATION DETAIL	CONTROL
Adhesive to concrete	Approx. 1 mm	Spread uniformly on sound concrete	Avoid voids
Adhesive to strip	1-2 mm	Approx. 3 mm at strip centre	Remove peel ply
Optional spacers	2 mm	Use where needed to control glue line	Compatible spacers

Bonding adhesive shall be compatible with the selected CFRP strip and substrate. Actual working time, temperature limits and cure schedule are governed by the approved adhesive system.

TYPICAL SYSTEM BUILD-UP

LAYER	MATERIAL / METHOD
1 | Substrate	Sound concrete prepared by grinding, grit blasting or similar treatment
2 | Verification	Check surface flatness and conduct adhesion trials on prepared concrete
3 | Epoxy adhesive	Apply bonding adhesive KREVO Carbon Bond EP to the concrete and strip at specified thickness
4 | CFRP reinforcement	Position KREVO Carbon Strip and press firmly to expel entrapped air
5 | Completion	Remove excess adhesive; allow cure before protective finish

SUBSTRATE PREPARATION

Remove dust, oil, grease, paint, surface coatings and all contamination by sand blasting, grit blasting, grinding or an equivalent method. Expose a sound, clean and mechanically keyed substrate. Repair deficient concrete before bonding; the surface must be capable of transferring the designed forces into the CFRP strip.

SURFACE TOLERANCES & QUALITY CONTROL

Check flatness using a 300 mm straightedge in any direction. Round or grind sharp arrises and ensure compatibility between the substrate, primer where required, and bonding epoxy. Perform a trial adhesion test before general installation.

PARAMETER	APPLICATION REQUIREMENT
Surface flatness	Maximum variation 1 mm over a 300 mm straightedge
Sharp edges / corners	Grind to a radius of at least 20 mm where relevant
Bond validation	Level surface with KREVO Carbon Bond EP

Do not place strips on unsound substrates. The strip, epoxy adhesive and existing structure must be assessed as a complete strengthening system by the responsible structural designer.

INSTALLATION READINESS

Plan the work to ensure that adhesive application, strip positioning and pressure rolling are completed within the adhesive pot life. Select the HS, IM or HM grade, width, thickness and strip termination details in accordance with the approved structural strengthening design.

Installation & Product Support

KREVO Carbon Strip | Bonding, pressing, curing, site limitations and international contacts

INSTALLATION PROCEDURE

- Verify the prepared substrate is sound, clean, dry enough for the approved epoxy and within surface tolerances.
- Apply a nominal 1 mm thick epoxy adhesive KREVO Carbon Bond EP layer to the prepared concrete bonding surface.
- Place the strip within the adhesive working time; press firmly and evenly against the substrate.

BONDING & FINISHING

- Apply sufficient pressure to establish continuous adhesive contact, expel air and squeeze out excess resin.
- Dress strip edges and remove surplus epoxy while uncured; avoid disturbing the strip after alignment.
- Maintain position until the adhesive has cured in accordance with its approved technical instructions.
- Apply the specified decorative or protective coating only after the adhesive has fully cured.

LIMITATIONS & SITE CONTROL

- Installation must follow the approved structural design and method statement by trained personnel.
- Substrate soundness and bond transfer must be verified before strengthening work commences.
- Use only the specified compatible high-performance epoxy adhesive and observe its pot life.
- Maintain adequate pressure and continuous contact to prevent an incomplete adhesive bond.
- Clean uncured adhesive from tools using a suitable solvent cleaner; hardened resin requires mechanical removal.

HEALTH, SAFETY & ENVIRONMENT

For industrial use by trained applicators only. Review the current Safety Data Sheets for the CFRP strip and bonding epoxy prior to use. Wear appropriate gloves, eye protection and protective clothing; use dust and respiratory controls when cutting, grinding or mechanically preparing concrete. Prevent solvent and uncured resin residues from entering drains.

QUALITY & PRODUCT INFORMATION

Selection of grade and strengthening capacity must be based on a project-specific engineered design. Confirm strip dimensions, mechanical properties, compatible epoxy adhesive, substrate bond performance and appropriate KREVO manufacturing or batch quality documentation prior to external technical approval.

KREVO | GLOBAL CONTACTS

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