KREVO Carbon Bond EP

High-strength thixotropic epoxy adhesive | CFRP strip and plate bonding | Standard & Slow grades

PRODUCT DESCRIPTION

KREVO Carbon Bond EP is a high-build, high-strength, thixotropic epoxy bonding system intended for externally bonded carbon-fiber strips, plates and rods and other approved reinforcing materials. Its non-sag consistency supports durable bonding of structural strengthening components on horizontal and vertical substrates.

ADVANTAGES

- High-strength, non-slump epoxy adhesive for structural strengthening work.
- Suitable for bonding CFRP strips, pultruded plates and compatible rods.
- Designed for direct application to properly prepared concrete without a separate primer.
- Formulated for good adhesion and resistance to a broad range of chemicals.
- Standard and Slow application grades for differing site conditions.

TYPICAL USES

Externally bonded CFRP strips and plates • Bonding carbon-fiber rods to concrete • Bonding external steel-plate reinforcement • Structural rehabilitation of beams, slabs and columns.

PRODUCT INFORMATION

PARAMETER	SPECIFICATION
Material type	Two-component, high-build, thixotropic epoxy adhesive
Intended use	Structural bonding of CFRP strips / plates / rods and approved steel plates
Grades	Standard | Slow
Material consistency	Non-sag, high-strength epoxy bonding paste
Application range	Standard: +5 to +30 °C | Slow: +15 to +45 °C*
Nominal unit packaging	5 Kg complete packs
Theoretical consumption	1 L/m^2 at a 1 mm nominal adhesive thickness
Shelf life / storage	12 months in sealed packs, dry and shaded below +35 °C

TECHNICAL PERFORMANCE SPECIFICATION

PROPERTY	SPECIFIED VALUE
Compressive strength	90 MPa
Tensile strength	23 MPa
Flexural strength	50 MPa
Compressive modulus	7 GPa
Tensile modulus	10 GPa
Coefficient of thermal expansion	33 × 10^{-6} /°C
Single-lap shear strength	>18 MPa
Water absorption / Tg (DMTA)	0.4% / >65 °C

Application & System Data

KREVO Carbon Bond EP | Working times, substrate acceptance and bond-line control

APPLICATION PROPERTIES

PROPERTY	STANDARD	SLOW	CONDITION
Application range	+5 to +30 °C	+15 to +45 °C*	Grade-specific
Pot life	60 min / 20 min	45 min / 20 min	At +10 °C / +20 °C
Initial cure	120 min / 50 min	90 min / 50 min	At +10 °C / +20 °C
Return to service	36 h / 24 h	24 h / 24 h	At +10 °C / +20 °C

Working and curing times depend on temperature, batch mass and site conditions. Mix and install within the usable pot life; verify the approved site method statement before use. *The general application limitation is +4 to +35 °C; obtain written technical approval for conditions above +35 °C.

TYPICAL SYSTEM BUILD-UP

LAYER	MATERIAL / METHOD
1 | Substrate	Sound, dry, clean and properly prepared concrete or approved substrate
2 | Surface acceptance	Confirm removal of contamination, unsound material and moisture
3 | Bonding material	Mix complete Part A / Part B packs of KREVO Carbon Bond EP
4 | CFRP reinforcement	Bed KREVO Carbon Strip/ plate / KREVO Carbon Rod, ensuring continuous contact
5 | Completion	Remove excess adhesive and maintain position through required cure

SUBSTRATE PREPARATION

The concrete or other specified surface shall be sound, dry, undamaged and free of dust, oil, grease, laitance, loose coatings and other bond-reducing contaminants. Remove defective concrete and reinstate it using a suitable approved repair system. Prepare the bonding face by grinding, grit blasting or another suitable mechanical method, and verify adhesion suitability before reinforcement is fixed.

BONDING CONDITIONS & QUALITY CONTROL

Establish ambient conditions and surface temperature before work. The adhesive must be mixed uniformly, applied without excessive build-up and maintained in close contact with both faces of the bond. Check substrate condition, bond-line continuity and environmental limits throughout the installation.

CONTROL ITEM	APPLICATION REQUIREMENT
Nominal thickness / coverage	Approx. 1 mm bond line; theoretical 1 L/m^2
Substrate condition	Sound and dry; no damaged or wet bonding face
Dew-point clearance	Do not apply within 3 °C of the dew point

Avoid over-application and do not use solvent as a finishing aid. Bonding design, plate dimensions, installation pressure and cure requirements shall be confirmed for the specific strengthening system.

APPLICATION & MIXING

Thoroughly pre-mix base Part A. Add the entire hardener Part B and blend with a slow-speed drill (approximately 300 rpm) and compatible epoxy mixing paddle for about 3 minutes until uniformly dispersed. Scrape the hardener container and mixing vessel to ensure complete incorporation. Mix full packs only.

Installation & Product Support

KREVO Carbon Bond EP | Mixing, adhesive placement, handling, storage and technical contacts

MIXING PROCEDURE

- Confirm that Part A and Part B are correctly matched and that all application tools are clean.
- Thoroughly pre-stir Part A using an appropriate low-speed epoxy mixing paddle.
- Add all of Part B to Part A and mix at approximately 300 rpm for 3 minutes or until uniform in colour.
- Scrape the container sides, fully incorporate the hardener and mix full supplied packs only.

PLACEMENT & FINISHING

- Apply the mixed adhesive to prepared bonding faces at the thickness specified by the strengthening design.
- Position the CFRP strip, plate or other approved reinforcement while the epoxy remains within its pot life.
- Press firmly to ensure full adhesive contact; expel entrapped air and remove surplus material from edges.
- Protect the installed reinforcement from movement, moisture and disturbance until the specified cure has elapsed.

LIMITATIONS & SERVICE NOTES

- Do not apply to wet or damaged substrates, or where surface conditions prevent a sound structural bond.
- Do not apply below +4 °C or above +45 °C without specific written technical approval.
- Do not apply when the substrate is within 3 °C of the dew point; check condensation risk.
- Avoid excessive application and do not finish the surface using solvent.
- Clean uncured adhesive from tools using a suitable solvent cleaner; hardened resin requires mechanical removal.

HEALTH, SAFETY & ENVIRONMENT

Industrial use by trained operatives only. Before handling, review the current Safety Data Sheet for both components. Wear suitable chemical-resistant gloves, safety eyewear and protective workwear; maintain adequate ventilation and manage skin-contact risks. Do not discharge adhesive or cleaning solvent into drains or waterways. Dispose of residues and containers in accordance with applicable regulations.

QUALITY & PRODUCT INFORMATION

KREVO Carbon Bond EP shall be used as part of an engineered and compatible strengthening system. Verify concrete condition, component compatibility, adhesive working life, installation temperatures and cure before putting the member into service. Product mechanical characteristics and application limitations must be confirmed by KREVO qualification documentation before project-specific performance certification.

KREVO | GLOBAL CONTACTS

ENGLAND	UNITED STATES	CHINA
10 Shipley Avenue, Fenham Newcastle upon Tyne England NE4 9RA +44 7436 650806 info@krevo.uk krevo.uk	9209 S. Aeva Avenue Evergreen Park, IL 60805 +1 (773) 996-0846 info@krevo.us krevo.us	Office 235, 4th Floor No. 5 Inner China +86 139 5536 3625 krevo.cn