

**Repair, Reinforcement and Restoration /
Structural Reinforcement Products****REPOX® 410T**

Epoxy Based, Thixotropic Adhesive and Assembly Paste for Carbofix Plate Systems

DESCRIPTION

Epoxy-based, double component, solvent-free, **thixotropic**, high strength **adhesive** and **assembly** paste specially developed for **CARBOFIX Plate** Systems.

APPLICATION AREAS

Indoor and outdoor, for bonding and assembly of carbon fiber reinforcement plates to surfaces in structures to be reinforced with **CARBOFIX Plate** Systems.

TECHNICAL PROPERTIES

Appearance - Color	Component A (Resin) : Paste – Cream Component B (Hardener) : Thixotropic Liquid – Dark grey								
Packaging	Component A: 3 kg, component B: 3 kg								
Mixture Density	1.60 ± 0.05 g/cm ³								
Application Temperature	Between +10°C and 30°C								
Compressive Strength	≥ 40 N/mm ² (TS EN 12190) 7 days								
Flexural Strength	≥ 20 N/mm ² (TS EN 12190) 7 days								
Adhesion Strength	≥ 3 N/mm ² - Fracture within the concrete substrate (TS EN 1542) 7 days								
Pot Life (6 kg)	<table><tr><th>Temperature</th><th>Duration (TS EN ISO 9514)</th></tr><tr><td>10°C</td><td>60 mn</td></tr><tr><td>20°C</td><td>30 mn</td></tr><tr><td>30°C</td><td>20 mn</td></tr></table>	Temperature	Duration (TS EN ISO 9514)	10°C	60 mn	20°C	30 mn	30°C	20 mn
Temperature	Duration (TS EN ISO 9514)								
10°C	60 mn								
20°C	30 mn								
30°C	20 mn								
Total Curing Time	7 days (23°C TS 4317)								
Service Temperature	Between -10°C and +60°C								

ADVANTAGES

- Suitable for assembly and bonding of carbon plates.
- Does not sag on vertical and overhead applications.
- Has very high adhesion strength.
- Does not contain solvent. Achieves high mechanical and chemical resistance after curing.

CONSUMPTION

The consumption of REPOX 410T mixture varies depending on the level of reinforcement, assembly and bonding. Under low temperature conditions, the viscosity increases and the consumption may also increase.

PACKAGING

Sets of 6 kg (A+B) tin buckets.

APPLICATION

PREPARATION OF THE SURFACE

- Clear the surface of all weakly adhered parts and materials that prevent bonding, such as dust, oil, tar, bitumen, paint, silicone, curing compounds, detergents and form-release oils.
- Chip away the corroded areas and clean the reinforcing steel of rust. After applying an anti-corrosion primer, carry out the repair using suitable **REPOX** series structural repair mortars.
- Prepare the surface with a suitable mechanical blasting method such as sandblasting or sanding to obtain a rough surface. Sweep the dust layer formed after mechanical cleaning with industrial vacuums.
- Where necessary, the prepared concrete surface should be primed with a suitable REPOX series primer.
- If the application surface is concrete, it must be cured (28 days) and have a minimum compressive strength of 25 N/mm² and tensile strength of 1.5 N/mm². The humidity of the floor concrete should be maximum 4% and the floor temperature should be at least 3°C above the condensation point. The surface temperature must be between 10°C and 30°C.

MIXTURE

- REPOX 410T is packaged as two components in appropriate quantities. First mix component A mechanically in itself. Add component B (hardener) to component A (epoxy resin). Mix for 3 – 4 minutes with a drill with a 300 – 400 rpm mixer until a homogeneous consistency is obtained. Avoid mixing for too long and at high speed to minimize air entrainment. Take the whole mixture into a clean container and mix again.
- Transfer the complete mixture into a clean container and re-mix thoroughly. The components are pre-packaged in the correct mixing proportions. When using partial quantities, ensure the mixing ratio is strictly maintained.

APPLICATION

- Apply REPOX 410T to the surface with a trowel or spatula. The application thickness should be between 0.5 - 3 mm.
- For carbon plate bonding, apply REPOX 410T on both the concrete surface and the carbon plate on both sides.
- After applying the resin to the carbon plate, allow it to absorb for a while, and then bond the plates to the pre-coated concrete surface without leaving air pockets. During this bonding process, use a roller to press on the plate and clean any excess epoxy resin spilling over the carbon plate.
- If plastering is desired on the finished application, apply **REPOX A Solvent-Free Epoxy Surface Primer** to the surface. While the primer is still wet, sprinkle dry silica sand, and prepare the surface for plastering.
- The mixture should be consumed within a maximum of 30 minutes at approximately +23°C.
- After 7 days at +23°C, the product reaches full cure and provides resistance to mechanical loads and aggressive chemical exposure.

CAUTION

- Avoid application at temperatures below +10°C and above +30°C.
- Use a low speed appropriate drill in mixing REPOX 410T, never mix manually or with a trowel.
- The components of REPOX 405 must be mixed in the correct proportions. Do not add water or solvent to the mixture, and do not dilute with thinner or similar materials.
- Materials should be brought to the application area at least 24 hours in advance to allow acclimatization to ambient conditions.
- The working and curing times of epoxy resin-based products depend on ambient and substrate temperatures. At low temperatures, viscosity increases, leading to higher consumption. The chemical reaction slows down, extending pot life and working time. At higher temperatures, the opposite occurs.
- If heating is required at the application area, use only electric warm-air blowing systems.
- Avoid application on frozen surfaces, where freezing is expected within 24 hours, or in areas exposed to direct sunlight and strong wind.



Technical Data Sheet (TDS)

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- Do not touch the surface for at least 24 hours after application and avoid water contact for 48 hours. Otherwise, carbonation may develop. In such cases, sand the surface and reapply a thin coating layer.
- After application, clean all equipment using solvent only. Hardened material can only be removed mechanically.

SHELF LIFE

Expires in 18 months. Store unopened packages in cool, dry and shaded environment between +10°C and +25°C. Protect from freezing. If Component A crystallizes, it can be heated at 60-70°C.

HEALTH AND SAFETY

As with all chemical products, avoid contact with food, skin, eyes and mouth during use and storage. In case of contact, wash immediately with plenty of water and soap, and if swallowed by accident, do not induce vomiting and consult a doctor immediately. During application, wear work clothes, protective gloves, goggles and masks in accordance with occupational health and safety rules. Do not bring food and beverage into the application areas. Do not approach the storage and application areas with fire. Ventilate the area. Store out of reach of children.

The application instructions and technical values given for the products have been obtained in accordance with our tests and experiences in accordance with international standards at 23±2°C temperature and 50±5% relative humidity conditions. These values may vary depending on ambient conditions. High temperatures shorten the times, low temperatures lengthen them. Before starting the application, the user should test whether the product is suitable for the application and purpose. FIXA Construction Chemicals Ltd. is not responsible. This Technical Data Sheet remains valid until the next revision is published. FIXA reserves the right to change the values specified in this Technical Data Sheet, provided that the new version is published. It is the user's responsibility to check that the document is up-to-date. Please contact our sales department for more information.