

**Repair, Reinforcement and Restoration / Structural Reinforcement Products****REPOX® 690T**

Epoxy Based, Double Component, Thixotropic, Solvent-Free Assembly Paste and Repair Mortar

**DESCRIPTION**

Double component, solvent-free, thixotropic, high-strength, epoxy-based assembly paste and repair mortar specially developed for **CARBOFIX** Systems.

**APPLICATION AREAS**

- As an adhesive for carbon fiber reinforcement fabrics and plates and concrete reinforcement resin in structures to be reinforced with Carbofix Systems.
- Concrete, natural stone, brick, wood, composite fiber lamination manufacturing, steel and metal surfaces,
- Fixing door and window frames,
- Bonding materials such as ceramic, tile, granite,
- Bonding and concrete reinforcement resin.

**TECHNICAL PROPERTIES**

|   |  |
|---|--|
| <b>Appearance - Color</b>                 | Component A (Resin) : Paste – Cream<br>Component B (Hardener) : Liquid – Dark Gray |
| <b>Density</b>                            | Mixture Density: 1.80 kg/lit (± %3)  |
| <b>Viscosity</b>                          | Mixture: 50.000 - 70.000 MPa   |
| <b>Shore D Hardness</b>                   | 7 days: 80 - 90 (ASTM D2240-05)  |
| <b>Compressive Strength</b>               | 28 days: > 80 N/mm <sup>2</sup> (ASTM D695-10)                                     |
| <b>Flexural Strength</b>                  | 7 days : > 25 N/mm <sup>2</sup> (ASTM D790)  |
| <b>Adhesion Strength</b>                  | 7 days : > 3 N/mm <sup>2</sup> (Beton) (ASTM D7234)                                |
| <b>Abrasion Resistance</b>                | 7 days: < 45 mg (CS 10/1000/1000) (ASTM D4060-14)                                  |
| <b>Remaining Time of Use After Mixing</b> | 40 - 60 minutes  |
| <b>Total Curing Time</b>                  | 7 days   |

**ADVANTAGES**

- Applied on vertical and overhead surfaces, does not sag.
- In paste consistency, easy to apply. Can be used as repair mortar.
- Adheres well, easy to apply
- Penetrates well
- Solvent-free
- High load carrying capacity
- High mechanical and chemical resistance
- Very high adhesion strength.

**PREPARATION OF THE SURFACE**

- The surface must be free of weakly adhered parts, clear of materials that prevent bonding, such as dust, oil, tar, paint, silicone, curing materials, detergents and mold oils and be rough to improve adhesion. Break the corroded surfaces and clean the iron reinforcement from rust, and repair with appropriate **REPOX** series structural repair mortars after anti-corrosion primer materials.
- Prepare the surface with a suitable mechanical blasting method such as grinding, sandblasting or sanding to obtain a rough surface. Sweep the dust layer formed after mechanical cleaning with industrial brooms.

- If the application surface is concrete, it must be cured (28 days) and have a minimum compressive strength of 25 N/mm<sup>2</sup> and tensile strength of 1.5 N/mm<sup>2</sup>. The humidity of the floor concrete should be maximum 4% and the floor temperature should be at least 3°C above the condensation point.

## MIXTURE

- REPOX 690T is packaged as two components in appropriate quantities. First mix each component in itself. Add 15 kg of component B (hardener) to 15 kg of component A (epoxy resin). Mix for 3-4 minutes until a homogeneous consistency is obtained with a drill with a 300 - 400 rpm mixer tip. Avoid mixing for too long and at high speed to minimize air entrainment. Take the whole mixture into a clean container and mix again. If a part of the product is to be used, pay attention to the mixing rates.
- Before mixing, make sure that the material temperatures are between +10°C and +30°C.

## APPLICATION

- REPOX 690T is a thixotropic product. It is preferred in applications where chemical resistance is required:
  - ✓ If REPOX 690T is to be used as a repair mortar, cut the edges of the broken surface as perpendicular as possible. Obtain geometric shapes such as square and rectangle. Drain and block any water leakage before application and the surface should be dry.
  - ✓ Apply the mortar with a trowel or spatula with a thickness between 2 - 30 mm. Application thickness should not exceed 30 mm in a single layer.
  - ✓ It may be necessary to use molds for repairs.
  - ✓ In order to be able to plaster on it, after the application of the top coat REPOX 690T, while the product is still wet, sprinkle toothed sand on the surfaces to be plastered to create roughness to facilitate the adhesion of the plaster.
- REPOX 690T is also used for bonding **CARBOFIX Plates** thanks to its thixotropic structure:
  - ✓ Adhere REPOX 690T to both the concrete surface and the carbon plate on both sides.
  - ✓ Allow the resin applied to the carbon plate to dry slightly for a while, then glue the plates by hand on the concrete surface on which the resin was previously applied so that there is no air gap. During this bonding process, apply pressure to the plate with a roller and clean the overflowing part of the epoxy resin on the carbon plate.
  - ✓ If it is desired to plaster on the finished application, apply **REPOX A Solvent Free Epoxy Surface Primer** to the surface, sprinkle dry silica sand while the primer is still wet to make the surface suitable for plastering.
- In case of the need to heat the area, do not use gas, oil, paraffin or similar fossil fuel heaters. Only electric heater systems that blow warm air should be used.
- Consume the mixture in maximum 30 minutes at average +23°C. Full curing and mechanical and chemical resistance is reached after 7 days.

## CONSUMPTION

REPOX 690T A+B mixture consumption varies depending on the level of reinforcement, installation and bonding. Under low temperature conditions, the viscosity increases and the consumption may also increase.

## CAUTION

- Avoid application at temperatures below +10°C and above +30°C. Do not apply outdoors in rainy and/or windy weather.
- Use a suitable drill in mixing REPOX 690T, never mix by hand or with a trowel.
- Do not add water, solvent, etc. to the mixture. Do not thin with thinner or similar materials.
- Bring the materials to the application area at least 24 hours before in order for them to adapt to the ambient conditions.
- Working and curing times of epoxy resin-based products depend on the ambient and floor temperature. As the viscosity increases at low temperatures, the amount of consumption also increases. The chemical reaction slows down, thus extending the pot life and working time. At high temperatures, the opposite is true.
- If heating is required in the application area, use only electrical, warm air blowing systems so that it does not affect the surface appearance.
- Avoid application in frozen areas at risk of freezing within 24 hours, or that are directly exposed to the sun and wind. Do not walk on for at least 24 hours after the application. Avoid water contact and condensation for

48 hours, otherwise carbonation will occur. In this case, clean the surface with sandpaper and apply a thin coat again. Do not apply on surfaces with insufficient waterproofing.

- After the application is finished, clean the equipment only with cellulosic thinner. Hardened grout can only be removed mechanically.
- The opened package should be consumed within a maximum of 1 week under appropriate storage conditions.

## PACKAGING

Sets of 30 kg (A+B) tin cans

## SHELF LIFE

Expires in 12 months. Store unopened packages in a cool, dry environment, protect from sun, between +15°C and +25°C. Protect against freezing.

## 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, 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.