

High Temperature Epoxy Adhesive for All Type of Composite or Metal/Steel Reinforced Bar

Two Component Epoxy Paste Adhesive

Key Properties Advantages

- * Ultra High Temperature until $<110^{\circ}\text{C}$
- * Suitable for Strip/Round Bar as Carbon Fiber & Steel Reinforced Bar
- * Gap Filling, Non Sagging up to 6.00 mm Thickness
- * Ultra High Shear Strength up to 25 N/mm²
- * High Peel Strength (Cleavage Strength) up to 9 N/mm²
- * Toughened Adhesive
- * Thixotropic
- * Properties of Good Curing, Glass Transition & Clamp Time
- * 3 Design of Curing Time for Standard, Slow & Fast Adhesive

Description

Epo Bond HT110 Adhesive is a two component, room temperature curing paste adhesive giving a resilient bond. It is thixotropic, high Shear & Cleavage strength and non sagging up to 10 mm thickness. It is particularly suitable for Concrete bonding to Concrete, Concrete bonding to Carbon Fiber Laminates Strip, Concrete bonding to SMC Panel and Metal bonding to Metal.

Processing Pretreatment

The strength and durability of the bonded joint are depending on proper treatment of the surfaces to be bonded. At the very least, joint surfaces should be cleaned with a good degreasing agent such as Acetone, Trichloroethylene or proprietary degreasing agent in order to remove all surfaces of oil, grease and dirt.

Alcohol, gasoline (petrol) or paint thinner should never be used.

The strongest and most durable joint are obtained by either mechanically abrading or chemically etching (pickling) the degreased surfaces. Abrading should be followed by a second degreasing treatment.

Application

The resin and hardener mix is applied with a Spatula Tools, to pretreated and dry joint surfaces.

A layer of Adhesive from 0.05 mm to 6.00 mm thick normally impart the greatest lap Shear Strength to the joint.

The joint component should be assembled and clamped as soon as the Adhesive has been applied. An even contact pressure throughout the joint area will ensure optimum cure.

Mechanical Processing

Specialist firm have developed metering, mixing and spreading equipment that enables the bulk processing of Adhesive. **LAMACO** will be pleased to advise customers on the choice of equipment for their particular needs.

Epo Bond HT110

Epoxy Adhesive High Temperature Data Sheet

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Times to Minimum Shear Strength

Temperature	°C	10	15	23	40	60	100
<u>Epo Bond HT110 Fast Adhesive</u>							
Cure time to reach							
Lap Shear Strength > 25 N/mm ²	Minutes	180	120	60	20	10	2
<u>Epo Bond HT110 Standard Adhesive</u>							
Cure time to reach							
Lap Shear Strength > 25 N/mm ²	Minutes	420	240	120	30	20	7

Typical Cured Properties Unless otherwise stated, the figures given below were all determined by testing standard specimens made by lap-jointing 170 mm x 25 mm x 1.50 mm strip of Carbon Fiber. The joint was 12.5 mm x 25 mm in each case.

The figures were determined with typical production batches using standard testing methods. They are provided solely as technical information and do not constitute a product specification.

Epoxy Adhesive Properties of Specification

Appearance	Component A: 2 parts by weight Component B: 1 parts by weight
Shear Strength	25 N/mm ²
Peel Strength (Cleavage)	9 N/mm ²
Tensile Strength at 35 °C	42 N/mm ²
Tensile Modulus	2 Gpa
Elongation at Break	4.4 %
Colour (visual)	Neutral Paste
Specific Gravity	1.4
Sag Flow at 35 °C	0.05 mm to 6.00 mm thick
Glass Transition Point	> 110°C
Coefficient of Expansion	9×10^{-6} per °C at 10°C to 40°C
Open Time at 35 °C	> 120 minutes
Pot Life at 35 °C	> 10 to 40 minutes
Shelf Life / Storage	36 months in original packaging & stored at 5°C to 25°C
Packing:	5 kg set

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Epoxy Adhesive High Temperature Data Sheet

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