EVER HARD

Fix it For Ever

Technical Data Sheet

Epox-2112

(jointing fiberglass pipes)

Product Description

This product is a two-component paste adhesive that works at room temperature and creates elastic adhesion. Thixotropic without sagging to a thickness of (10 mm). Especially suitable for SMC and GRP connection.

Advantages

Toughened paste

Ideal for bonding GRP, SMC and dissimilar substrates

Low shrinkage

Gap filling, non-sagging up to 0.394 in (10 mm) thickness

High shear and peel strength

Typical Properties

Property	part A	part B	mixed system
Appearance	natural paste	natural paste	natural paste
Density (g/cm3)	1.6	1.4	1.5
Viscosity at 25 C	thixotropic	thixotropic	thixotropic
Pot life at 25°C, 100 g, min			30-40 min

Processing

Mix ratio Product	by weight
Part A resin	100
Part B hardener	33

EVER HARD

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Pretreatment

The strength and durability of a bonded joint are dependent 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, isopropanol (for plastics) or other proprietary degreasing agents in order to remove all traces of oil, grease and dirt. Low-grade alcohol, gasoline, or paint thinners should never be used. The strongest and most durable joints are obtained by either mechanically abrading or chemically etching the degreased surfaces. Abrading should be followed by a second degreasing treatment.

Instructions for use

Thoroughly mix the resin and hardener by combining the specified weight percentage for at least 3 minutes with a mechanical stirrer to form a uniform mixture. Then apply the adhesive on the surface with a suitable thickness with the help of a spatula. The optimal thickness for adhesion is between 0.05 to 0.1 mm. If possible, the connection point should be kept completely fixed with suitable fixtures. Refer to the adhesive connection brochure to connect the composite parts.

Equipment maintenance

All tools should be cleaned with hot soapy water before the adhesive residue dries. Removing cooked debris is a difficult and time consuming operation. If solvents such as acetone are used for cleaning, staff should take appropriate precautions and, in addition, avoid skin and eye contact.

Cure times to reach minimum shear strength

Temperature,F	50	59	73	104	140	212
Cure time to reach LSS > 145 psi (1 mpa)						
Hours	12	7.5	4	1	-	-
Minute	-	-	-	-	17	6
Cure time to reach LSS > 1450 psi (10 mpa)						
Hours	21	13	6	2	-	-
Minute	-	-	-	-	35	7

*LSS = Lap shear strength

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Typical Physical Properties

Property	value	test method
Average lap shear strength, metal-metal joints	1800 psi	ASTM D-1002
Average lap shear strength, plastic-plastic joints	1300 psi	ASTM D-1002
Hardness	40	ASTM D-2240
Glass transition	85 C	ASTM D-3418
Roller peel test	3.1	ISO-4578
Flexural strength	5800 psi	ASTM-D790

chemical properties

Type of chemical	Product resistance	Type of chemical	Product resistance
engine oil	Excellent	30% sodium hydroxide	Excellent
10% sulfuric acid	Good	50%Calcium hydroxide	Excellent
30% sulfuric acid	Good	20%Potassium hydroxide	Excellent
37% hydrochloric acid	Good	20% sodium hydroxide	Excellent
20% citric acid	Good	30% sodium hydroxide	Excellent
Nitric acid 10%	Good	Methanol	Inappropriate
Sodium hydroxide 10%	Good	Petrol	Excellent
Calcium hydroxide 50%	Excellent	Salt water	Excellent

Test conditions: temperature 25 ° C and humidity 50% immersion in chemical solutions according to standard D 896 – 04

health and safety

The adhesive should be stored in closed containers at a temperature of 25 degrees.

After using the material, close the lid of the remaining material tightly.

Before using the material on the surface, make sure that there is no dust, damp or moisture on the surface.

Before using the material, clean the surface from any grease and dirt.

Wear industrial gloves and a mask when using materials.