

EPAND-594

Technical data sheet



MAVAD ALI ALBORZ
مهندسی مواد آلی البرز

Product Description

This product is a two-component epoxy adhesive based on epoxy and aromatic polyamine hardeners, which is used for tipper connection of pipes and GRE and GRP composite connections. Due to its special formulation, this adhesive has excellent chemical resistance against aromatic solvents and acids and is a very good choice for petroleum fluids. This adhesive needs temperature curing before the path is tested or put into service. Temperature curing increases the cross-link density of the adhesive, which leads to an increase in chemical resistance, shear strength and temperature resistance for the adhesive. This adhesive can be used up to 150 degrees.

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
-) Very high chemical resistance to chemical fluids
-) High temperature resistance

Typical Properties Property	part A	part B	mixed system
Appearance color	natural paste light gray	natural paste cream	natural paste light gray
Density (g/cm ³)	1.4	1.4	1.4
Viscosity at 25 C	thixotropic	thixotropic	thixotropic
Pot life at 25°C, 100 g, min			15-20 min

Processing

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

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on the corner of Karkhane Ghand cross road,
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Cure times to reach minimum shear strength					
Temperature,F	60	77	104	140	212
Cure time to reach LSS > 145 psi (1 mpa)					
Hours	10	4	2	-	-
Minute	-	-	20	8	
Cure time to reach LSS > 1450 psi (10 mpa)					
Hours	23	12	5	2	-
Minute	-	-	-	-	25
*LSS = Lap shear strength					

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Typical Physical Properties

Prop erty	value	Test method
Average lap shear strength, metal-metal joints	1800 psi	ASTM D-1002
Average lap shear strength, plastic-plastic joints	1550 psi	ASTM D-1002
Hardness	41	ASTM D-2240
Glass transition	100	ASTM D-3418
Roller peel test	3.2	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
50% sulfuric acid	Excellent	50%Calcium hydroxide	Excellent
30% sulfuric acid	Excellent	20%Potassium hydroxide	Excellent
37% hydrochloric acid	Excellent	20% sodium hydroxide	Excellent
20% citric acid	Excellent	30% sodium hydroxide	Excellent
Lactic acid 10%	Excellent	Crude oil	Excellent
Sodium hydroxide 10%	Excellent	Petrol	Excellent
Calcium hydroxide 50%	Excellent	Toluene	Excellent

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