

# EPAND -591

## Technical data sheet



MAVAD ALI ALBORZ  
مهندسی مواد آلی البرز

### Product Description

A two-component, surface tolerant, paste grade system for repairing and rebuilding machinery and equipment. Based on silicon steel alloy blended with high molecular weight reactive polymer and oligomers. Ideal for use as a high-strength structural bonding adhesive or for the creation of irregular load-bearing shims.

### Application

When mixed and applied as detailed in the instruction for use, the system is ideally suited for application to damp and oil contaminated surfaces. In addition, the material can be applied underwater.

Typical Properties Property	part A	part B	mixed system
Appearance	paste	past	paste
Color	dark gray	light pink	gray
Density (g/cm <sup>3</sup> )	2.7	1	2.1
Pot life at 25°C, 100 g, min			15min

### Processing

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

### Completion of the molecular reaction

temperature	Machining and/or light loading	Full mechanical or thermal loading
41 F/ 5 C	6 hours	4 day
50 F/ 10 C	4 hours	2 day
68 F/ 20 C	2 hours	1 day
86 F/ 30 C	1 hours	16 hours
104 F/ 40 C	30 min	12 hours

### Typical Physical Properties

Office. : Unit 5, second floor, Shohada building,  
on the corner of Karkhane Ghand cross road,  
Karaj city, Alborz province.. Iran  
Factory. : SH Block, Talashgaran Alley koshesh AVE,  
kowsar industrial Zone. Karaj city, Alborz province.. Iran  
Tel: . +982632772130-32  
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Property	value	test method
Tensile shear		
Mild steel (clean & dry)	2300 psi (16 mpa)	ASTM D1002
Mild steel (transformer oil)	2150 psi (14.5 mpa)	ASTM D1002
Mild steel (wet)	1780 psi (13 mpa)	ASTM D1002
Mild steel (underwater)	1595 psi (11 mpa)	ASTM D1002
Stainless steel	1600 psi (13 mpa)	ASTM D1002
Aluminums	1305 psi (9 mpa)	ASTM D1002
Pull of adhesion	2465 psi (17 mpa)	ASTM D4541
Clean & dry	3625 psi (25 mpa)	ASTM D4541
Transformer oil	2610 psi (18 mpa)	ASTM D4541
Wet	1740 psi (12 mpa)	ASTM D4541
Underwater	1450 psi(10 mpa)	ASTM D4541
Compressive strength	11600 psi(80 mpa)	ASTM D695
Tensile st	4350 psi(30 mpa)	ASTM D638
Flexural strength	8410 psi(58 mpa)	ASTM D790
Hardness		
Shore D	83	ASTM D2240
Heat resistance	55C	ASTM D648

### chemical properties

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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	Petrol	Excellent
Sodium hydroxide 10%	Excellent	Toluene	Excellent
Calcium hydroxide 50%	Excellent	Crude oil	Excellent

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