

# Epand-590

## Technical data sheet



MAVAD ALI ALBORZ  
مهندسی مواد آلی آلبرز

### Product Description

A two-component paste grade system for repairing and rebuilding machinery and equipment. Based on a silicon steel alloy blended with high molecular weight reactive polymers. When cured, the material is durable yet fully machinable. Also used as a high-strength structural adhesive for bonding or for the creation of irregular load-bearing shims with good electrical insulation characteristics. For use in original equipment manufacture or repair situations.

### Application areas

When mixed and applied as detailed in the instruction for use, the system is ideally suited for application to the following

- ) Shafts
- ) Keyways
- ) pipes
- ) Hydraulic rams
- ) engine blocks
- ) tank
- ) Bearing housings
- ) casings
- ) flange faces

Typical Properties Property	part A	part B	mixed system
Appearance	paste	paste	paste
Color	dark gray	light gray	dark gray
Density (g/cm <sup>3</sup> )	2.8	1.6	2.2
Pot life at 25°C, 100 g, min			16min

### 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,  
Karaj city, Alborz provience.. Iran  
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### Completion of the molecular reaction

temperature	Movement or use involving no loading or immersion	Machining and/or light loading	Full mechanical or thermal loading	Immersion in chemical
41 F/ 5 C	4 hours	6 hours	4 day	5 day
50 F/ 10 C	3 hours	4 hours	2 day	4 day
59 F/ 15 C	135 min	3 hours	1.5 day	3 day
68 F/ 20 C	105 min	2 hours	1 day	2 day
77 F/ 25 C	60 min	90 min	20 hours	1.5 day
86 F/ 30 C	45 min	60 min	16 hours	1 day

### Typical Physical Properties

Property	value	test method
Tensile shear		ASTM D1002
Mild steel	2750 psi (19 mpa)	ASTM D1002
Stainless steel	2950 psi (20 mpa)	ASTM D1002
Aluminium	1995 psi (13 mpa)	ASTM D1002
Pull of adhesion	2873 psi (20 mpa)	ASTM D4541
Abrasion cs-17 wheels	49.5 (mg/cycle)	ASTM D4060
Compressive strength	15955 psi(110 mpa)	ASTM D695
Tensile strength	4790 psi(33 mpa)	ASTM D638
Flexural strength	8410 psi(58 mpa)	ASTM D790
Hardness		
Shore D	85.1	ASTM D2240
Barcol hard	40	ASTM D2583
Heat resistance	85 C	ASTM D648
Impact resistan	32 j/m	ASTM D256

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

Test conditions: temperature 25 ° C and humidity 50% immersion in chemical solutions according to standard D896 – 04