



# NEW FREEMAN ADHESIVES

Freeman offers a broad line of two-component epoxy and methacrylate adhesives for bonding a wide range of metals and plastics. They allow great versatility in formulation to meet your project requirements. They form extremely strong, durable bonds with a wide range of substrates, including those which can be "difficult to bond".

## Specifications

	Alternative to	Mix Ratio (by wt.) Resin: Hardener	Gel Time (min.)	Light Handling Time	Cure time at 73°F (hr.)	Mixed Viscosity (cps)	Hardness (Shore D)	Tensile Strength	Serviceable Temp. (°F)	Color
<b>Freeman Epoxy Adhesives</b>										
<b>Fre-Weld 8103</b>	RenWeld 103	1:1	20-30	8 hr.	24	7,000/5,000	70	7,100	300	Clear
<b>EP 8010</b>	Fastweld 10	1:1	3-5	20-30 min.	24	Thixotropic	80	7,000	266	Clear
<b>EP 8211</b>	Araldite 2011	1:1	120	4 hr.	48	12,000	82	7,500	302	Amber
<b>EP 8212</b>	Araldite 2012	1:1	8-12	30-60 min.	24	16,000	80	2,300	266	Clear
<b>EP 8214</b>	Araldite 2013-1 & Araldite 2014	1:1	60	10 hr.	24	80,000	70	3,000	266	Gray
<b>EP 8215-1</b>	Araldite 2015	2:1	40-60	2-4 hr.	24	50,000	80	6,600	302	Off-White
<b>EP 8258</b>	Araldite AV 1258	2:1	50-60	2-4 hr.	24	30,000	80	6,600	302	White
<b>Freeman Methacrylate Adhesives</b>										
<b>MA 8221</b>	Araldite 2021-1 & MP 55300	1:1	3-6	10-15 min.	18-24 min.	70,000-120,000	-	3,000-3,500	250	Amber
<b>MA 8305</b>	MP 55305	1:1	2-4	6-8 min.	8-10	70,000-120,000	-	3,000-3,500	250	Amber
<b>MA 8310</b>	Araldite 2022-1 & MP 55310	1:1	8-12	30-45 min.	24 hr.	70,000-120,000	-	3,200-3,500	250	Amber
<b>MA 8420</b>	MP 55420	10:1	3-7	9-15 min.	15-20 min.	95,000-115,000	-	3,000-3,500	250	Amber
<b>ASTM</b>	-	-	D-2471	-	-	D-2393	D-2240	D-638	-	-

## FREEMAN EPOXY ADHESIVES

### Fre-Weld 8103

- ▶ 20-30 min. gel time
- ▶ 8 hr. handling time
- ▶ Viscosity:  
7,000 Resin / 5,000 Hardener

Fre-Weld 8103 is formulated for the effective bonding of Foam, Modeling, Styling, and Tooling Boards as well as most metals and plastics. It cures at

room temperature and features excellent vibration and impact resistance with high peel and shear strength.

### Freeman EP 8010

- ▶ 3-5 min. gel time
- ▶ 20-30 min. handling time
- ▶ Thixotropic

Freeman EP 8010 is designed for the quick bonding of metals, ceramics, and most plastics. Its thixotropic paste consistency prevents runout and sagging.

It also features good resistance to water, salt spray, inorganic acids and bases, and most organic solvents.



### Freeman EP 8211

- ▶ 2 hr. gel time
- ▶ 4 hr. handling time
- ▶ 12,000 cps viscosity

Freeman EP 8211 is a low-viscosity, polyamine adhesive designed for the bonding of metals and plastics. It features an extended working time

of 2 hours and good chemical, corrosion, and water resistance.

## FREEMAN EPOXY ADHESIVES CONTINUED

### Freeman EP 8212

- ▶ 8-12 min. gel time
- ▶ 30-60 min. handling time
- ▶ 16,000 cps viscosity

Freeman EP 8212 is designed for quickly bonding metals, ceramics, and most plastics, with a service temperature up to 266°F. It features good

resistance to water, salt spray, inorganic acids and bases, and most organic solvents.

### Freeman EP 8214

- ▶ 60 min. gel time
- ▶ 10 hr. handling time
- ▶ 80,000 cps viscosity

Freeman EP 8214 is designed for bonding metals, ceramics, and many plastics. Its mineral filling offers great vibration and impact resistance. It is

free flowing which allows air to naturally release and promotes self-leveling. EP 8214 also features good resistance to water, salt spray, inorganic acids and bases and most organic solvents.

### Freeman EP 8215-1

- ▶ 40-60 min. gel time
- ▶ 2-4 hr. handling time
- ▶ 50,000 cps viscosity

Freeman EP 8215-1 is designed for structural bonding and laminating where high strength, mechanical and electrical properties are required. This

adhesive offers great dimensional stability over a wide range of temperatures. It bonds to most materials, including fiberglass, ceramics, metal, and many plastics. It is also resistant to water, weather, oxygen, solvents, other organic compounds, including diesel fuel and gasoline.

### Freeman EP 8258

- ▶ 50-60 min. gel time
- ▶ 2-4 hr. handling time
- ▶ 30,000 cps viscosity

Freeman EP 8258 is similar to EP 8215 in design but with lower viscosity, slightly longer gel time, and improved lap shear strength.

## FREEMAN METHACRYLATE ADHESIVES

### Freeman MA 8221

- ▶ 3-6 min. gel time
- ▶ 10-15 min. handling time
- ▶ 70,000-120,000 cps viscosity

Freeman MA 8221 is designed for structural bonding of various substrates, including fiberglass, steel, aluminum and various plastics with good

chemical resistance. This adhesive has a working time of 3-6 minutes and achieves nearly 90% of its ultimate strength in 10-15 minutes at room temperature curing, with gap filling up to 0.250".

### Freeman MA 8305

- ▶ 2-4 min. gel time
- ▶ 6-8 min. handling time
- ▶ 70,000-120,000 cps viscosity

Freeman MA 8221 is designed for structural bonding of various substrates, including fiberglass, steel, aluminum and various plastics with good

chemical resistance. This adhesive has a working time of 2-4 minutes and achieves nearly 90% of its ultimate strength in 8-10 minutes, with gap filling up to 0.25".

### Freeman MA 8310

- ▶ 8-12 min. gel time
- ▶ 30-45 min. handling time
- ▶ 70,000-120,000 cps viscosity

Freeman MA 8310 is designed for structural bonding of various substrates, including fiberglass, steel, aluminum and various plastics with little

preparation effort. This adhesive offers good chemical resistance. It has a working time of 8-12 minutes and achieves nearly 90% of its ultimate strength in 18-25 minutes, with gap filling up to 0.375".

### Freeman MA 8420

- ▶ 3-7 min. gel time
- ▶ 9-15 min. handling time
- ▶ 95,000-115,000 cps viscosity

Freeman MA 8420 offers a flexible structural bond to various substrates, including fiberglass, steel, aluminum, and various plastics. This

flexible bond allows for great deal of movement of substrates due to CTE. It has a working time of 3-7 minutes and achieves nearly 90% of its ultimate strength in 10-15 minutes, with gap filling up to 0.50".

For part numbers, technical documents, and ordering, visit our website at [www.FreemanSupply.com](http://www.FreemanSupply.com).



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