



# **Technical Data Sheet**



### **Structural Adhesive Technologies**

EV Bond 440 is a high performance two part acrylate adhesive engineered to bond a wide range of plastics, metals, and composite assemblies. It offers outstanding bond strength, is extremely durable, with excellent impact and weathering properties. EV Bond 440 greatly increases the reliability of finished assemblies, its ability to with stand extreme temperature fluctuation, and resistance to a wide range of chemicals and environmental conditions.

EV Bond 440GB allows control of the adhesive gap to a diameter of 0.25mm (0.01").

Technology/Base:	Modified Acrylic
Type of Product:	Structural Adhesive
Components:	Two Component
Curing:	Room Temperature Cure
Appearance / Color:	Off White or Yellow
Consistency:	Viscous Liquid

# Recommended ForMetalsThermoplasticsAluminumAcrylicSteelABSStainlessPolycarbonateE-Coated Metal

Fiberglass Phenolic Gel Coat Epoxy RIM Urethane Polyurethane Liquid Molding Resin

#### Features and Benefits

- No Surface Preparation Required
- Excellent Adhesion Properties
- Excellent Strength to Metals, E-Coat, Thermoplastics, Thermosets, and Engineering Plastics

- High Impact Resistance
- Suitable for Easy Manual and Pneumatic Dispensing

- 100% Reactive
- Room Temperature Cure
- 10:1 meter-mix product for ease of application
- Use on as received metal surfaces including aluminum, stainless and plated steels and forms tough, high strength bonds without surface preparation



# Plug into our EV Adhesive Technology

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## **Technical Data**

Rheology		Condition/Method
Viscosity - Resin	100,000 – 200,000 cPs @ 25°C	Brookfield RV7 20 rpm
Viscosity - Activator	40,000 - 80,000 cPs @ 25°C	Brookfield RV7 20 rpm
Density		
Mixed Density	1.67 g/cc	
Mix Ratio		
Volume Mix Ratio	10:1	
Weight Mix Ratio	14:1	
Uncured Material Characteristics		
Flash Point	>200°F	
Open Time	18 - 23 minutes	
Fixture Time	40 - 50 minutes	
Cure Temperature and Time	Room Temperature, 24 hr	
Cured Mechanical Properties		
Gap Fill Dimension		
Hardness	70 Shore D	ASTM D2240
Tensile Strength		
Over Lap Shear Strength		
Carbon Steel	15MPa (2,175 psi)	ASTM D1002, 25°C 50% RH
Aluminum	15MPa (2,175 psi)	ASTM D1002, 25°C 50% RH
Nickel Coated Low - Carbon Steel Plated	20MPa (2,900 psi)	ASTM D1002, 25°C 50% RH
Dielectric Strength	18.5 ± 0.9 kV/mm	
Elongation at Break	>3%	
Cured Thermal Properties	-67°F to 212°F	
Thermal Service Range		



#### General Information

The product is best used at temperatures between 65°F and 80°F. Temperatures below 65°F will slow the cure speed of the material and viscosities will be higher. Temperatures above 80°F will cause the material to cure faster and viscosities will be lower. For consistent dispensing maintain temperature in the above mentioned range. For optimum bond strength and to insure maximum performance in the finished assembly mate parts together within the specified work time of the adhesive. Make sure the bond joint has uniform coverage and that a sufficient amount of adhesive is in the bond area. It is important to have the adhesive applied, parts aligned and positioned, within the established work times for the product. To ensure maximum performance in the finished assembly parts should remain undisturbed until the fixture time is reached.



#### Handling and Clean-Up

Clean up is best before the adhesive has cured. Cleaners containing NMP (N-methyl pyrolidone) or Citrus terpene provide the best results. On cured adhesive repeat use may be required.



#### Storage and Shelf Life

Product should be stored in a cool dry place out of direct sunlight. The shelf life of EV Bond 440 is 9 months from date of manufacture. Shelf life is based on the products being stored properly at temperatures between 55°F and 75°F. Exposure to temperatures above 75°F will reduce the shelf life. This product should NEVER BE FROZEN.



#### **Typical Packaging**

EV Bond 440 is conveniently packaged in 50 ml, 490 ml, pail, and drum kits. Special packaging is available upon request.



#### Safety and Disposal

For safe handling information on this product, consult the Safety Data Sheet (SDS)

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