



## Technical Data Sheet



## Thermal Management Adhesive Technologies

EV Therm 420 is a modified, highly engineered Structural Acrylic Adhesive designed to provide excellent thermal conductivity while maintaining superior strength and performance properties across a wide range of temperatures and substrates.

EV Therm 420 is low odor, has excellent flame retardant properties and meets UL 94V-0 certification.

EV Therm 420GB allows control of the adhesive gap to a diameter of 0.25mm (0.01”).

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

### Recommended For

#### Metals

Aluminum  
Steel  
Stainless  
E-Coated Metal

#### Thermoplastics

Acrylic  
ABS  
Polycarbonate

#### Thermosets

Fiberglass  
Phenolic  
Gel Coat  
Epoxy  
RIM Urethane  
Polyurethane  
Liquid Molding Resin



## Features and Benefits



- Thermally Conductive
- 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
- UL94 V0 Flame Retardancy
- 100% Reactive
- Room Temperature Cure
- 10:1 meter-mix product for ease of application
- Use on aluminum, stainless and plated steels forms tough, high strength bonds without surface preparation
- Low Odor



### Plug into our EV Adhesive Technology

Download our app to learn more



## Technical Data

<b>Rheology</b> Viscosity - Resin Viscosity - Activator	100,000 - 150,000 cPs @ 25° 40,000 - 80,000 cPs @ 25°C	<b>Condition/Method</b> Brookfield RV7 20 rpm Brookfield RV7 20 rpm
<b>Density</b> Mixed Density	1.55 g/cc	
<b>Mix Ratio</b> Volume Mix Ratio Weight Mix Ratio	10:1 14:1	
<b>Uncured Material Characteristics</b> Flash Point Open Time Fixture Time Cure Temperature and Time	>200°F 6 - 9 minutes 10 - 20 minutes Room Temperature, 24 hr	
<b>Cured Mechanical Properties</b> Gap Fill Dimension Hardness Tensile Strength Over Lap Shear Strength Carbon Steel Aluminum Nickel Coated Low - Carbon Steel Plated Thermal Conductivity Flame Retardancy Dielectric Strength Elongation at Break	75 Shore D  16 MPa (2,321 psi) 16 MPa (2,321 psi) 22 MPa (3,190 psi) 1.0 W/(m*K) UL94 V0 19.0 ± 0.9 kV/mm >4%	ASTM D2240  ASTM D1002, 25°C 50% RH ASTM D1002, 25°C 50% RH ASTM D1002, 25°C 50% RH
<b>Cured Thermal Properties</b> Thermal Service Range	-67°F to 212°F	



### 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 pyrrolidone) or Citrus terpene provide the best results. On cured adhesive repeat use may be required.



### Typical Packaging

EV Therm 420 is conveniently packaged in 50 ml, 490 ml, pail, and drum kits. Special packaging is available upon request.



### Storage and Shelf Life

Product should be stored in a cool dry place out of direct sunlight. The shelf life of EV Therm 420 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.



### Safety and Disposal

Please see the Safety Data Sheet (SDS) for proper handling and disposal instructions.

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