



## EPIBOND® 1559-1 A/B Epoxy Adhesive

### Product Description

EPIBOND®1559-1 A/B epoxy adhesive is a two-part, flame retardant material with good peel strength properties. This paste adhesive was designed with extremely quick set times, even at colder temperatures, making it ideal for fast repairs. At 77°F, handling strength of 50 psi is developed in as little as ten minutes, and after only one hour at room temperature a lap shear strength of 1200 psi is achieved. EPIBOND® 1559-1 A/B epoxy adhesive bonds well to metals, composite laminates, most thermoplastics, and dissimilar materials. Parts A and B are supplied in contrasting colors so that complete mixing is indicated by a uniform gray color. EPIBOND® 1559-1 A/B epoxy adhesive can be used to fabricate or repair aircraft interior parts, which fulfill the FAR 25.853, meets requirements of UL 94 V-0 and O.S.U. requirements when used in conjunction with other low combustible composite components.

### Features

- UL94 V-0 flame retardant
- Rapid cure
- Available in both off-white and gray
- Available in 50mL and 200mL cartridges

### Typical Properties\*

Property	Test Method	1559-1 A Resin	1559-1 B Hardener	Mixed System
Appearance	Visual	A - Lt. Blue C - Off White	B - Gray D - Off White	AB - Lt. Gray CD - Off White
Density g/cm <sup>3</sup>	ASTM D792	1.25	1.25	1.25
Viscosity at 77°F (25°C), cP	ASTM D2196	60,000	70,000	65,000

\*Typical properties are based on Huntsman's test methods. Copies are available upon request.

## Processing

### Mix Ratio

If crystallized, place containers in 120°F (49°C) oven for 15 - 30 minutes. Allow material to cool to room temperature before mixing. To mix by hand, add one part by weight or volume of EPIBOND® 1559-1 A resin, add one part by weight or volume of EPIBOND® 1559-1 B hardener, and mix thoroughly for 1 minute to achieve a uniform color. Due to the very fast setting properties of EPIBOND® 1559-1 A/B, hand mixing should be avoided. EPIBOND® 1559-1 A/B is available in 50 mL and 200 mL twin cartridges. For best results, Epibond® 1559-1 A/B should be dispensed using manual or pneumatic dispensing equipment through a suitable mixing nozzle as shown below:

Cartridge Size	Width/Diameter, in	Number of Elements	Nordson EFD Part Number	Sulzer Mixpac Part Number
50 mL	0.20	20	7701830	N/A
	0.25	20	7701488	N/A
200 mL	0.34	24	7701385	MCQ 08-24T
	0.37	24	7700983	MCH 10-24T

Material temperatures should be above 65°F (18°C) when mixing. For other mixing and application recommendations, please consult your local Huntsman Advanced Materials representative or one of our distributors.

### Processing Data

Parameter	Value
Gel time, 50 g at 77°F (25°C), min	4-10
Typical Cure Cycle	24 h at 77°F (25°C) or 1 h at 77°F (25°C) + 30 min at 158°F (70°C)

### Typical Physical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

Property	Test Method	Test Temperature	Value
Tensile lap shear strength, Al-Al, psi (MPa) Curing conditions: 15 min at 77°F (25°C) 1 hr at 77°F (25°C) 24 hr at 77°F (25°C) 1 hr at 77°F (25°C) + 30 min at 158°F (70°C) 1 hr at 77°F (25°C) + 30 min at 158°F (70°C) 7 days at 160°F (71°C) 7 days at 160°F (71°C) / 95% RH	ASTM D1002	77°F (25°C) 77°F (25°C) 77°F (25°C) 77°F (25°C) 180°F (82°C) 75°F (23°C) 75°F (23°C)	260 (1.8) 1,200 (8.2) 2,700 (18.6) 3,800 (26.2) 400 (2.8) 3,800 (26.2) 3,500 (24.1)
T-Peel, Al-Al, lb <sub>f</sub> /in	ASTM D1876	77°F (25°C)	8.1
Glass transition temperature, T <sub>g</sub> °F (°C)	ASTM D3418	--	131 (55.3)
Flammability, 12 sec ignition, vertical Test specimen dimensions: 12in x 3in x 0.25in Self-extinguishing time, sec Drip extinguishing time, sec Burn length, inch	FAR 25.853		<1 No Drip 0.13
Flammability, 60 sec ignition, vertical Self-extinguishing time, sec Burn length, inch	FAR 25.853		1 4

### Storage

**EPIBOND® 1559-1 A/B Epoxy Adhesive** should be stored in a dry place in the original sealed container at temperatures between 2°C and 40°C (36°F and 104°F). Tightly reseal containers after each use. Under these storage conditions, and when supplied under Huntsman standard certification, the product has a shelf-life of **1 year** (from date of manufacture). The components should not be exposed to direct sunlight.

## **Precautionary Statement**

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

### **First Aid!**

Refer to SDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN**

**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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