

**Advanced Materials****Epocast® 50-A1 Resin  
Hardener 946****EPOXY LAMINATING SYSTEM**

- High Strength
- Self Extinguishing
- Short Work Life

**DESCRIPTION :**

Epocast® 50-A1 Resin/Hardener 946 epoxy laminating system is an unfilled, solvent-free, easy-to-handle material for the manufacture or repair of composite structures as well as for filament winding. Epocast® 50-A1 resin/Hardener 946 epoxy laminating system is self extinguishing. Epocast® 50-A1 / Hardener 946 is qualified to BMS 8-201, Type IV, Rev. F. This product is also available in a longer work life version - Epocast® 50-A1 resin/Hardener 9816 epoxy laminating system.

**TYPICAL PROPERTIES AS RECEIVED :**

<u>Property</u>	<u>50-A1 Resin</u>	<u>946 Hardener</u>	<u>50-A1/946 System</u>	<u>Test Method</u>
Color	Amber	Straw	Amber	Visual
Density, g/cc.	1.21	1.05	1.18	ASTM-D-792
Viscosity, at 77°F (25°C), cP	7,770	400	2,400	ASTM-D-2196
Gel time, at 77°F (25°C), 100 gms, minutes	--	--	20	ASTM-D-2471

**MIX RATIO :**

To 100 parts by weight of Epocast® 50-A1 resin, add 15 parts by weight of Hardener 946. Mix both components thoroughly for several minutes to insure a complete and uniform mixture. Mix only that quantity which can be applied within several minutes after mixing to avoid excessive exotherm.

**CURE SCHEDULE :**

Five days at 77°F (25°C) or two hours at 170-200°F (77-93°C) after room temperature gel. Handling and machining may be done after 8-16 hours at room temperature.

**TYPICAL CURED PROPERTIES** (Not for specification purposes)

<u>Test</u>	<u>Results</u>			<u>Test Method</u>
	Cure 7 days at 77°F*	Cure 27 days at 77°F*	Cure 1 day at 77°F + 2 hr. at 150°F*	
	12 ply #1581 or 7781 glass laminate			
Compressive strength, Ksi (MPa) at 77°F (25°C)	46.03 (317)	50.58 (349)	48.30 (333)	ASTM-D-790
Compressive modulus, Msi (MPa)	4.04 (27.9)	3.43 (23.6)	3.66 (25.2)	ASTM-D-790
Flammability, 60 second vertical test				
self extinguishing time, sec.	0		0	
drip extinguishing time, sec.	0		0	
burn length, in. (cm)	<6 (<15)		<6 (<15)	FAR 25.853A

\* 77°F=25°C; 170°F=77°C

**STORAGE :**

Epocast<sup>®</sup> 50-A1 Resin/Hardener 946 should be stored in a dry place, in the sealed original container, at temperatures between +2°C and +40°C (+35.6°F and 104°F). The product should not be exposed to direct sunlight. Under these storage conditions, and when supplied under Huntsman standard certification, this product has a shelf life of 1 year (expiration date may differ based on customer specification).

Material temperatures should be above 18°C (65°F) when mixing. After use, tightly reseal containers.

**PRECAUTIONARY STATEMENT :**

Huntsman Advanced Materials Americas LLC maintains up-to-date Material Safety Data Sheets (MSDS) 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 MSDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN****FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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