

**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; qualification to BMS 8-201, Type 4 is pending. This product is also available in a longer work life version - Epocast® 50-A1 resin/Hardener 9816 epoxy laminating system.

**TYPICAL PROPERTIES AS RECEIVED :**

<b><u>Property</u></b>	<b><u>50-A1 Resin</u></b>	<b><u>946 Hardener</u></b>	<b><u>50-A1/946 System</u></b>	<b><u>Test Method</u></b>
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
Shelf life, at 77°F (25°C), unopened, months	12	12	--	--

**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/  
SHELF LIFE :** Epoxy resins and hardeners should be stored in a dry place in their original, sealed containers at temperatures from 60-100°F (16-38°C). Material temperatures should be above 65°F (18°C) when mixing. After use, tightly reseal containers.

Under these conditions, epoxy resins and hardeners will remain useable for 12 months from date of shipping from Huntsman.

**CAUTION :**

Huntsman Advanced Materials Americas Inc. 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. Copies of the latest MSDS may be requested by calling our customer service group at 800-367-8793 or emailing your request to [adhesives\\_group@huntsman.com](mailto:adhesives_group@huntsman.com).

**FIRST AID !**

Eyes and skin: Flush eyes with water for 15 minutes. Contact a physician if irritation persists. Wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

Inhalation: Remove subject to fresh air.

Swallowing: Dilute by giving water to drink and contact a physician promptly. Never give anything to drink to an unconscious person.

**KEEP OUT OF REACH OF CHILDREN**

**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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