

## Product Data

# EPOCAST® 50-A1 Resin Hardener 9816 EPOXY LAMINATING SYSTEM

- High Strength
- Self Extinguishing
- Long Work Life

### DESCRIPTION

Epocast 50-A1 resin/Hardener 9816 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 9816 epoxy laminating system is self extinguishing; qualification to BMS 8-201, Type 3 is pending. This product is also available in a shorter work life version - Epocast 50-A1 resin/Hardener 946 epoxy laminating system.

### TYPICAL PROPERTIES AS RECEIVED

<u>Property</u>	<u>50-A1 Resin</u>	<u>9816 Hardener</u>	<u>50-A1/9816 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	250	2,400	ASTM-D-2196
Gel time, at 77°F (25°C), 100 gms, minutes	--	--	65	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 14 parts by weight of Hardener 9816. 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 16-24 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 170°F*	
	12-ply laminate using #1581 or 7781 glass			
Compressive strength, Ksi (MPa) at 77°F (25°C)	45.86 (316)	49.00 (338)	46.24 (319)	ASTM-D-790
Compressive modulus, Msi (MPa)	3.52 (24.3)	3.13 (21.6)	4.16 (28.7)	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

### **IMPORTANT LEGAL NOTICE:**

Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of Huntsman Advanced Materials Americas Inc. ("Huntsman"). The following supercedes Buyer's documents.

**WARRANTY:** Huntsman warrants that at the time and place of delivery all Products sold to Buyer shall conform to the specifications provided to Buyer by Huntsman.

**DISCLAIMER AND LIMITATION OF LIABILITY:** EXCEPT AS SET FORTH ABOVE, HUNTSMAN MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF ANY THIRD PARTY, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES. No statements or recommendations made herein are to be construed as a representation about the suitability of a Product for the particular application of Buyer or user or as an inducement to infringe any relevant patent. Buyer is responsible to ensure that its intended use of the Product does not infringe any third-party's intellectual property rights. Huntsman's maximum liability for any claim related to the Products or breach of an agreement associated therewith shall be limited to the purchase price of the Products or portion thereof to which such claim pertains. IN NO EVENT SHALL HUNTSMAN BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO ANY DAMAGES FOR LOST PROFITS OR BUSINESS OPPORTUNITIES OR DAMAGE TO REPUTATION.

**WARNING:** Technical data and results are based upon tests under controlled laboratory conditions and must be confirmed by Buyer by testing for its intended conditions of use. The Product described herein has not been tested for, and is therefore not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses. Furthermore, Huntsman shall not be liable for, and Buyer assumes all risks related to, the technical or other information or advice contained herein, or hereafter provided by Huntsman whether or not at Buyer's request.

© 2005 Huntsman Advanced Materials Americas Inc.  
Epocast is a registered trademark of Huntsman LLC or an affiliate thereof in one or more, but not all, countries.