

Advanced Materials**Epocast[®] 1657-A/B****EPOXY SYNTACTIC**

- Low Density System
- Two-to-one Mix Ratio
- High Compressive Strength

DESCRIPTION :

Epocast[®] 1657-A/B epoxy syntactic is a low-density system that maintains good physical properties at elevated temperatures after a room-temperature cure. Epocast[®] 1657-A/B epoxy syntactic is well suited for core filling metal skins to add stiffness and strength. Typical applications include fabricated parts such as helicopter rotor blades. Epocast[®] 1657-A/B epoxy syntactic is also suitable for core splicing and strengthening radii and corners on reinforced plastic structures. The high-strength material is available in dual-barrel cartridges for easy handling even in isolated repair areas.

TYPICAL PROPERTIES AS RECEIVED :

<u>Property</u>	<u>1657-A Resin</u>	<u>1657-B Hardener</u>	<u>1657-A/B System</u>	<u>Test Method</u>
Color	Lt. blue	Off-white	Lt. blue	Visual
Density, g/cc.	0.77	0.78	0.77	ASTM-1622
Viscosity, at 77°F (25°C), cP	Paste	Paste	Semi-paste	ASTM-D-2196
Gel time, 100 gms at 77°F (25°C), minutes	--	--	35-60	ASTM-D-2471
Shelf life at 77°F (25°C), unopened, months	6	6	--	--

MIX RATIO :

To 100 parts by weight of Epocast[®] 1657-A resin, add 51 parts by weight of Epocast[®] 1657-B hardener. Mix both components thoroughly for several minutes to insure complete blending. Alternatively, the product can be dispensed from a dual-barrel cartridge at a 2:1 pbv mix ratio through a 1/8 in. (3mm) mixing nozzle.

NOTE: Mix only the amount of resin and hardener that can be used within 25 minutes in quantities of no greater than 100 grams at one time to prevent excessive exotherm. Excessive exotherm may cause increased system shrinkage, discoloration, product decomposition and/or generation of toxic fumes. It is good practice to spread-out the mixed syntactic into shallow sections during application to reduce the mass/surface ratio, minimize heat build-up and extend gel time.

CURE SCHEDULE :

Three to seven days at 77°F (25°C), or gel at 77°F (25°C) followed by 2-3 hours at 150°F (66°C).

TYPICAL CURED PROPERTIES (Not for specification purposes)

<u>Test</u>	<u>Result</u>	<u>Test Method</u>
Compressive strength, (2% strain) at -67°F (-55°C), Ksi (MPa)	14 (96)	ASTM-D-695
at 77°F (25°C)	11 (76)	
at 180°F (83°C)	6 (41)	
at 350°F (177°C)	0.33 (2.3)	
Ultimate compressive strength, at 77°F (25°C), Ksi (MPa)	18 (124)	
Tensile lap shear, (etched AL/AL), psi (MPa)	1.4 (0.009)	ASTM-D-1002

STORAGE/ SHELF LIFE : Syntactic epoxy resins and hardeners should be stored in a dry place in their original, sealed containers at temperatures from 60-90°F (16-32°C). Material temperatures should be above 65°F (18°C) when mixing. After use, tightly reseal containers. Frozen materials should be stored at 0°F (-18°C) or colder and allowed to thaw at room temperature before use.

Under these conditions, syntactic epoxy resins and hardeners will remain useable for 6 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.

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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