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Advanced Materials

Epocast® 1614-A1

FROZEN EPOXY SYNTACTIC

- One Part Structural Syntactic
- High Compressive Strength
- Low Density

DESCRIPTION :

Epocast® 1614-A1 epoxy structural syntactic is a low-density, frozen, one-component material for use on honeycomb composite parts requiring high compressive strength at service temperatures up to 350°F (177°C). Epocast® 1614-A1 epoxy structural syntactic may also be used for fastener or attachment potting and panel edge reinforcing. It is qualified to BMS 5-28, Type 14, Classes 1 and 2 and other specifications.

TYPICAL PROPERTIES AS RECEIVED :

Property	Result	Test Method
Color	Reddish Brown	Visual
Density, g/cc	0.75	ASTM-D-1622
Extrudability, g/min. at 77°F (25°C)	800	BMS 5-28
Work life, at 77°F (25°C), after thaw, hours	8	ASTM-D-1338
Shelf life at -20°F (-29°C) or below, unopened, days	90	--

HANDLING CHARACTERISTICS :

Extrusion rate varies with thawing method and length of time after thaw. Adjust thawing technique to suit the application. Cartridges may be thawed in a microwave oven used for that purpose, OR thaw 10-12 minutes in a 125°F (50°C) water bath, OR 10 minutes @ 180°F (83°C) in an air circulating oven OR 1-2 hours at 77°F (25°C). Patties may be thawed 1/2 to 1 hour @ 77°F (25°C). Keep patty tightly wrapped with plastic film to prevent moisture contamination from condensation. DO NOT IMMERSE PATTY IN WATER.

CURE SCHEDULE :

Heat the material from room temperature at the rate of 5-7°F (3-4°C) per minute, plus 1 hour at 350°F (177°C) or 90 minutes at 250°F (121°C). Cure temperature refers to temperature of material as determined by thermocouple. (Slow heat rise at 5-7°F (3-4°C) per minute is preferred to reduce shrinkage and minimize out-gassing during cure).

TYPICAL CURED PROPERTIES (Not for specification purposes)

Test	Result	Test Method
Tensile lap shear, AL/AL, psi (MPa)	1,000 (6.9)	ASTM-D-1002
Compressive strength at 77°F (25°C), psi (MPa)	14,500 (100)	ASTM-D-695
at 250°F (121°C), psi (MPa)	10,000 (69)	
at 350°F (177°C), psi (MPa)	7,000 (48)	
Flammability, horizontal	self extinguishing	--
Weight gain on immersion after 24 hours at 77°F (25°C), %		ASTM-D-543
Mil-S-3136, Type III test fluid	0.10	
Mil-H-5606 hydraulic fluid	0.30	
Skydrol hydraulic fluid	0.20	
Distilled water	0.20	

STORAGE/ SHELF LIFE : Syntactic epoxy materials should be stored in their original, sealed containers at -20°F (-29°C) or colder and allowed to thaw at room temperature before use.

Under these conditions, syntactic epoxy materials will remain useable for 90 days from date of manufacture.

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 advanced_materials@huntsman.com.

FIRST AID !
Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.
Inhalation: Remove to fresh air. Seek immediate medical attention.
Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

KEEP OUT OF REACH OF CHILDREN

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together with proper shipping, handling and storage procedures for the Product, and should comply with all applicable governmental laws, regulations and standards relating to the handling, use, storage, distribution and disposal of, and exposure to the Product. Buyer shall also take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product, and the containers or equipment in which the Product may be handled, shipped or stored.

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