

# Epocast<sup>®</sup> 1614-A1

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

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.

| <u>Property</u>                                      | <u>Result</u> | <u>Test Method</u> |
|------------------------------------------------------|---------------|--------------------|
| 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            | --                 |

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.**

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).

| <u>Test</u>                                               | <u>Result</u>      | <u>Test Method</u> |
|-----------------------------------------------------------|--------------------|--------------------|
| 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               |                    |

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**STORAGE/** Syntactic epoxy materials should be stored in their original, sealed containers  
**SHELF LIFE :** 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.

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**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](mailto: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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