

LOCTITE EA 9825 AERO

Epoxy Paste Adhesive

(KNOWN AS Hysol EA 9825)

INTRODUCTION

LOCTITE EA 9825 AERO is a low-density, one-component epoxy syntactic for use on honeycomb composite parts requiring high compressive strength at temperatures up to 350°F (177°C). LOCTITE EA 9825 AERO may also be used for fastener or attachment potting and panel edge reinforcing

FEATURES

- One Part Structural Syntactic
- High Compressive Strength
- Low Density
- Dual Cure System 250°F (121°C) or 350°F (177°C)

Properties

| | |
|--|-----------|
| Color | Amber |
| Cured Density, g/cc | 0.72 |
| Extrusion Rate, g/min. @ 77°F (25°C) (See Handling Characteristics below) | 1,000 |
| Work life, at 77°F (25°C), after thaw, hours | 8 |
| Shelf life @ 10°F (-12°C) or below | 12 Months |

Handling Characteristics

For consistent extrusion rate performance the following handling recommendation should be performed. Remove frozen cartridges from the freezer and allow the cartridges to thaw at 65-90°F (18-32°C) for 4 hours. Place the cartridges in a sealed waterproof plastic bag and place into a controlled water bath set at 77°F (25°C) for 4 hours prior to extrusion. Recommended extrusion process would be to use a pneumatic hand gun at 85 psi (6 bar) without nozzle.

Cure Schedule

Heat the material from room temperature at the rate of 3.0± 1°F (1.7±0.6°C) per minute to either 250°F (121°C) for 90-100 minutes or 350°F (177°C) for 60-70 minutes. Recommend a cool down rate of 3-5°F (1.7-2.8°C) per minute to room temperature.

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Typical Cured Properties**Compression Strength Average Performance**

- Test #1: Specimen Dimension: 0.5" thickness x 1" width x 2" height (12.7 mm x 25.4 mm x 50.8 mm)
- Test #2: Specimen Dimension: 0.5" thickness x 0.5" width x 1" height (12.7 mm x 12.7 mm x 25.4 mm)
- Specimen soak time at elevated test temp. condition was 10 minutes at test temp. prior to testing
- Test method per ASTM D695 with a test rate of 0.05 inches per minute (1.27 mm per minute)
- Five specimens tested per test condition

| Test# | Cure Schedule | Specimen Conditioning | Test Temp. °F (°C) | 2% Offset | | Ultimate | |
|-------|------------------|-----------------------|-----------------------|-----------|------|----------|-------|
| | | | | KSI | MPa | KSI | MPa |
| 1 | 250°F (121°C) | Initial | 77 (25) | 10.7 | 73.8 | 13.3 | 91.7 |
| 1 | 350°F (177°C) | Initial | 77 (25) | 9.3 | 64.1 | 12.2 | 84.1 |
| | | | 300 (149) | 6.7 | 46.2 | 8.6 | 59.3 |
| 2 | 350°F (177°C) | Initial | 77 (25) | - | - | 14.6 | 100.7 |
| | | | 350 (177) | - | - | 7.2 | 49.7 |

Compression Strength Average Performance after Heat Aging

| Test# | Cure Schedule | Specimen Conditioning | Ultimate Tested Temp. at 77°F (25°C) | | |
|-------|---------------|-----------------------------|--------------------------------------|-------|-------------------|
| | | | KSI | MPa | Percent Retention |
| 1 | 350 (177) | Heat Aging at 350°F (177°C) | | | |
| | | Initial (0 Days) | 13.8 | 95.1 | - |
| | | 10 Days | 13.9 | 96.1 | 101% |
| | | 20 Days | 14.1 | 97.5 | 103% |
| | | 30 Days | 14.2 | 98.3 | 103% |
| | | 40 Days | 14.8 | 102.0 | 107% |
| | | 60 Days | 14.1 | 97.5 | 103% |
| | | 90 Days | 14.5 | 99.8 | 105% |



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Handling Precautions

Do not handle or use until the Material Safety Data Sheet has been read and understood.
For industrial use only.

DISPOSAL INFORMATION

Dispose of spent remover and paint residue per local, state and regional regulations. Refer to HENKEL TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional disposal information.

PRECAUTIONARY INFORMATION

General:

As with most epoxy based systems, use this product with adequate ventilation. Do not get in eyes or on skin. Avoid breathing the vapors. Wash thoroughly with soap and water after handling. Empty containers retain product residue and vapors so obey all precautions when handling empty containers.

PART A

CAUTION! This material may cause eye and skin irritation or allergic dermatitis. It contains epoxy resins.

PART B

WARNING! This material causes eye and skin irritation or allergic dermatitis. It contains amines.

Before using this product refer to container label and HENKEL TECHNOLOGIES MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.





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