

LOCTITE STYCAST ES 6026

August 2020

PRODUCT DESCRIPTION

LOCTITE STYCAST ES 6026 provides the following product characteristics:

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|--|--|
| Technology | Epoxy |
| Appearance - Mixed | Black |
| Components | Two components - requires mixing |
| Mix Ratio, by weight - Resin : Hardener | 100 : 20 |
| Mix Ratio, by volume - Resin : Hardener | 3.1 : 1 |
| Product Benefits | <ul style="list-style-type: none"> • Non-conductive • Low stress • Low shrinkage • High thermal conductivity • Passes NASA outgassing • Low viscosity • Long gel time |
| Cure | Room temperature cure |
| Application | Potting and Encapsulating |

LOCTITE STYCAST ES 6026 is a two component, high performance epoxy system. This material is formulated to provide low stress and low shrinkage during cure to prevent cracking of ferrite components, while providing superior thermal shock resistance.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Shelf Life - Refer to package label for proper storage condition

Part B Properties

Shelf Life - Refer to package label for proper storage condition

Mixed Properties

| | |
|-----------------------------------|-------|
| Specific Gravity, mixed | 1.73 |
| Mixed Viscosity, mPa·s (cP): | |
| @ 25°C | 7,000 |
| @ 85 °C | 550 |
| Work Life, 50 gram mass, minutes: | |
| @ 121°C | 15 |
| @ 100 °C | 60 |

TYPICAL CURING PERFORMANCE

Gel Time

Gel Time, 50 gram mass, minutes:

| | |
|----------|----------|
| @ 100°C | 90 |
| @ 121 °C | 30 to 40 |

Recommended Curing Conditions

6 hours @ 82 °C + post cure at operating temperature of 4 hours

Alternate Cure Schedule

16 to 20 hours @ 82°C or
4 to 6 hours @ 100°C + a post cure of 2 hours @ 121°C or
4 hours @ 121°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and specific application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

| | |
|-------------------------------|-------|
| Hardness, Shore D | 95 |
| Thermal Conductivity, W/(m·K) | 0.634 |
| Elongation, % | 1.7 |
| Linear Shrinkage, in/in | 0.006 |
| Moisture Absorption, % | 0.01 |

Electrical Properties

| | |
|--|----------------------|
| Volume Resistivity, ohm-cm | 1.8×10^{16} |
| Dielectric Constant / Dissipation Factor : | |
| @ 100 Hz | 4.1/0.005 |
| @ 1 KHz | 4.1/0.005 |
| @ 100 KHz | 4.0/0.008 |
| Dielectric Strength, volts/mil | 1,010 |

Adhesive Properties

| | |
|----------------------|--------------------------|
| Compressive Strength | N/mm ² 126.79 |
| | (psi) (18,390) |
| Tensile Strength | N/mm ² 36.54 |
| | (psi) (5,300) |

TYPICAL PERFORMANCE OF CURED MATERIAL

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

DIRECTIONS FOR USE

1. Pre-mix resin and pre-mix hardener separately.
2. Weigh the above resin and hardener into a clean container, and mix until a uniform color.
3. Pour mixture into another clean container, and mix for 30 seconds.
4. Use low speed mixing to reduce air entrapment. If air bubbles persist, place under vacuum.
5. Cure mixture according to above cycle. Cure time is measured after the product reaches curing temperature.
6. Should crystallization appear in hardener 027, warm container to 65°C to remelt crystals. Usually, 2 hours in a circulating air oven is sufficient for complete melting.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Liquid Storage - Liquids should be stored at 25°C or below, in closed containers. If stored below 25°C, the material MUST be allowed to come to room temperature, in the sealed container, to avoid moisture contamination.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Henkel Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\text{N} \times 0.225 = \text{lb/F}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{psi} \times 145 = \text{N/mm}^2$
 $\text{MPa} = \text{N/mm}^2$
 $\text{N} \cdot \text{m} \times 8.851 = \text{lb} \cdot \text{in}$
 $\text{N} \cdot \text{m} \times 0.738 = \text{lb} \cdot \text{ft}$
 $\text{N} \cdot \text{mm} \times 0.142 = \text{oz} \cdot \text{in}$
 $\text{mPa} \cdot \text{s} = \text{cP}$

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Reference 1