

LOCTITE® STYCAST A 316-48

September 2012

PRODUCT DESCRIPTION

LOCTITE® STYCAST A 316-48 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Filler type	Oxide
Application	Heat resistant adhesive
Typical package application	Sensors and control modules
Surfaces	Plastics, phenolics, metals and ceramics
Operating temperature	-40 to 180°C
Product benefits	• One component • Fast heat cure • Heat resistance • Non-conductive • Exceptional thermal stability • Excellent chemical resistance

LOCTITE® STYCAST A 316-48 is an oxide filled, pourable epoxy adhesive designed for use in harsh automotive applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield, mPa·s (cP)	50,000
Specific gravity	1.4
Shelf life @ 25°C, days	91
Flash point - see SDS	

TYPICAL CURING PERFORMANCE

Cure schedule

- 30 minutes @ 100°C or
- 5 minutes @ 120°C or
- 3 minutes @ 140°C or
- 1 minutes @ 160°C

Post cure

2 to 4 hours at the highest expected use temperature

The above cure profiles are guideline recommendations. These 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

Coefficient of thermal expansion, ISO 11359-2, ppm/°C:

Below Tg	55
Above Tg	155

Glass transition temperature, ISO 11357-2, °C 145

Thermal conductivity, W/(m·K) 0.4

Hardness, Shore D

@25°C	86
@130°C	40

Electrical properties

Volume resistivity, ohms-cm

@25°C	1×10 ¹⁵
@130°C	3×10 ¹³

Dielectric constant, IEC 60250

1 kHz	3.75
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TYPICAL PERFORMANCE OF CURED MATERIAL

Tensile strength:

Aluminum, @ 25°C	N/mm ²	17.3
	(psi)	(2,500)

GENERAL INFORMATION

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

Directions for use

1. Complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt and oils which can cause poor adhesion or corrosion in a bonded part.
2. Apply adhesive to all surfaces to be bonded and join together.
3. In most applications only contact pressure is required.

Storage

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

Optimal storage: 25°C

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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.

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 the specifications of this product.

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

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