

LOCTITE STYCAST A 316-48

September 2012

PRODUCT DESCRIPTION

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

Technology	Epoxy
Appearance	Black
Product Benefits	<ul style="list-style-type: none">• One component• Fast heat cure• Heat resistant• Non-conductive• Exceptional thermal stability• Excellent chemical resistance
Cure	Heat cure
Filler Type	Oxide
Application	Heat resistant adhesive
Typical Package	Sensors and Control modules
Application	
Surfaces	Plastics, Phenolics, Metals and Ceramics
Operating Temperature	-40 to 180 °C

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. Cure conditions (time and temperature) may vary based on customers' experience and their 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:	
Below Tg, ppm/°C	55
Above Tg, ppm/°C	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:	
1kHz	3.75

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 Material Safety Data Sheet, (MSDS).

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

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.

Storage

Store product in the 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 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 Technical Service Center or Customer Service Representative.

Conversions

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

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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