Technical Data Sheet

LOCTITE STYCAST 933-48

March 2021

PRODUCT DESCRIPTION

LOCTITE STYCAST 933-48 provides the following product characteristics:

Technology	Epoxy
Appearance	Black liquid
Cure	Heat cure
Product Benefits	• One component • Good thermal shock resistance • High temperature properties
Operating Temperature Range	-40 to +180ºC
Application	Encapsulation, Potting

LOCTITE STYCAST 933-48 is designed for use on automotive sensors and other electronic devices that must survive high operating temperatures. This encapsulant provides protection from thermal and mechanical shock.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Density, g/cm³	1.45
Viscosity, Brookfield , mPa·s (cP)	150,000
Shelf Life @ 8 to 28°C, days	150
Flash Point - See SDS	

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

150 minutes @ 120°C
30 minutes @ 160 °C
12 minutes @ 175 °C

This product generates moderate heat during cure. No adverse exotherm effects are obtained when cured at 125ºC in masses up to approximately 100 grams.

Cure schedules are "the time at cure temperature to achieve full product cure". The times does not include the time required to ramp-up to cure temperature.

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:	
@ 25°C	85
@ 120°C	39
Glass Transition Temperature, °C	106
Coefficient of Thermal Expansion :	
Alpha 1, ppm	38
Alpha 2, ppm	127

Electrical Properties

Volume Resistivity @ 25°C, ohms-cm	1.0×10^{14}
Dielectric Strength, kV/mm	13.8

GENERAL INFORMATION

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

THAWING:

1. Allow container to reach room temperature before use.

Directions for Use

1. Do not keep product below 0ºC to avoid crystallization.
2. Certain products are prone to crystallization. If crystallization does occur, warm the contents of the shipping container to 40ºC until all crystals have dissolved .
3. Complete cleaning of the components and substrates should be performed to remove contamination such as dust, moisture, salt and oils which can cause electrical failure, poor adhesion or corrosion in an embedded part.
4. Some filler settling is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
5. To ensure a void-free embedment, vacuum deairing or degassing should be performed to remove any entrapped air introduced during the mixing operation.
6. Pump-down or pull vacuum on the mixture to achieve an ultimate vacuum or absolute pressure of torr or mm Hg. The foam will rise several times in the liquid height and then subside.
7. Continue vacuum deairing until most of the bubbling has

ceased. This usually takes 3 to 10 minutes.

8. Pour mixture into cavity or mold.
9. Gentle warming of the mold or assembly reduces the viscosity. This improves the flow of the material into the unit having intricate shapes or tightly packed coils or components.
10. Further vacuum deairing in the mold may be required for critical applications.

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 : 8 to 28 °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 Henkel Representative.

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Conversions
(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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