

LOCTITE STYCAST G 508-9

February 2016

PRODUCT DESCRIPTION

LOCTITE STYCAST G 508-9 provides the following product characteristics:

Technology	Epoxy
Appearance	Beige
Cure	Heat cure
Product Benefits	• Readily pourable • Good surface appearance • Low coefficient of thermal expansion • Low thermal conductivity
Application	Encapsulant

LOCTITE STYCAST G 508-9 is a pourable, flame retardant epoxy with exceptional resistance to heat, water, freon and other strong solvents. It is recommended for applications requiring long term electrical service up to 180°C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, Brookfield, 25 °C, mPa·s (cP):

Spindle 6, speed 10 rpm 60,000

Density @ 25 °C, g/cc 1.61

Flash Point - See SDS

TYPICAL CURING PERFORMANCE

Gel Time

1 hour @ 125°C

8 minutes @ 160°C

4 minutes @ 180°C

Cure Schedule

2 hours @ 125°C

30 minutes @ 160°C

12 minutes @ 180°C

Cure at any one of the recommended cure schedules.

In case LOCTITE STYCAST G 508-9 has solidified or has a higher viscosity than normal, heat material to 60°C for 1 hour to reduce viscosity and liquefy the material. After heating, it can then be cured as per any of the cure schedules listed above.

Recommended cure schedule for minimum shrinkage during cure is 3 hours @ 125°C.

Moderate heat is generated during cure. No adverse exotherm effects when cured at 125°C, in masses up to about 50 grams.

This product may generate excessive heat if cured in thicknesses greater than 0.5 inch at a temperature above 125°C. Dielectric strength and other evaluated temperature and electrical properties can be further improved by post-curing for 1 hour @ 180°C or 2 hours @ 150°C.

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

Shore Hardness, Shore D:

@ 25°C 85

@ 120°C 65

Thermal Conductivity, W/(m·K) 0.576

Electrical Properties

Volume Resistivity, ASTM D257, ohms-cm:

@ 25°C 4×10^{14}

@ 180°C 2×10^{10}

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. In case LOCTITE STYCAST G 508-9 has solidified or has a higher viscosity than normal, heat material to 60°C for 1 hour to reduce viscosity and liquefy the material. After heating, it can then be cured as per the regular cure schedule..

Conversions

(°C x 1.8) + 32 = °F

kV/mm x 25.4 = V/mil

mm / 25.4 = inches

N x 0.225 = lb

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

Disclaimer

Note:

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Reference 0.1