

LOCTITE HYSOL GR 500

February 2014

PRODUCT DESCRIPTION

LOCTITE HYSOL GR 500 is a Green, semiconductor grade mold compound providing the following product characteristics:

Technology	Epoxy
Cure	Heat
Appearance	Black
Filler Type	Silica
Filler Weight, %	88
Application	Mold Compound
Target Package(s)	SOIC, TSOP and QFP
Product Benefits	• Low stress • Low moisture absorption • Excellent solder reflow resistance
Flammability Rating	UL 94 V0 @ 1/8 inch thickness

LOCTITE HYSOL GR 500 is a green epoxy-based molding compound offers much improved JEDEC performance as well as moldability property.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Spiral Flow, @ 175°C, inches	49
Gel Time @ 175°C, seconds	45
Shelf Life @ 5°C, days	183
Specific Gravity, g/cm ³	1.99

TYPICAL PROCESS DATA

Handling

Preheat Temperature, °C	70 to 90
Molding Temperature, °C	170 to 190
Transfer Pressure, Kg/cm ²	40 to 85
Transfer Time, automold, seconds	5 to 15
Hot Hardness, Shore D, after 90 seconds	80
Curing Time @ 175 °C, seconds	70 to 120
Post Mold Cure @ 175 °C, hours	4 to 8

LOCTITE HYSOL GR 500 has been formulated to provide the best possible moldability and as wide a molding latitude as possible. Although molding and curing conditions will vary from situation to situation, recommended starting ranges are shown above.

Please contact Henkel Technical Service for alternative process parameters if needed.

TYPICAL PROPERTIES OF CURED MATERIAL

All measurements are taken at 175°C, unless otherwise noted.

All physical, electrical and analytical measurements are taken on specimens cured for 120 seconds @ 175°C with post cure of 6hours @ 175°C, unless otherwise specified.

Physical Properties

Glass Transition Temperature (Tg) by DMA, °C	107
Coefficient of Thermal Expansion, TMA, ppm/°C:	
Below Tg	8
Above Tg	32
Flexural Modulus @ 25 °C	N/mm ² 21,500 (psi) (3,118,310)
Flexural Strength @ 25°C	N/mm ² 150 (psi) (21,755)
DMA Modulus:	
@ 25 °C	N/mm ² 25,928 (psi) (3,760,540)
@ 175 °C	N/mm ² 570 (psi) (82,670)
@ 260 °C	N/mm ² 600 (psi) (87,020)

GENERAL INFORMATION

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

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.

Mold Compound materials should be stored at 5°C or below, in closed containers. After removal from cold storage, the material MUST be allowed to come to room temperature, in the sealed container, to avoid moisture contamination. The suggested waiting time for a standard 15 kg carton box is 24 hours.

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

(°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
 N/mm² x 145 = psi
 MPa = N/mm²
 MPa x 145 = psi
 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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