

LOCTITE HYSOL GR 2220

October 2014

PRODUCT DESCRIPTION

LOCTITE HYSOL GR 2220 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Filler Type	Fused Silica
Filler Weight, %	75
Product Benefits	• Green product • Environmentally friendly • High moldability • Fast cycle time
Typical Package Application	Tantalum capacitor
Flammability Rating	UL 94 V0 @ ¼ inch thickness

LOCTITE HYSOL GR 2220 epoxy molding compound delivers outstanding performance and ease of use.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Spiral Flow, @ 175°C, inches	32
Gel Time @ 175 °C, seconds	18
Shelf Life @ 5°C (from date of manufacture), days	365
Specific Gravity, g/cm ³	1.82

TYPICAL PROCESS DATA

Handling

Molding Temperature, °C	160 to 200
Transfer Pressure, Kg/cm ²	40 to 80
Transfer Time, seconds	5 to 15
Curing Time, @ 180 °C, seconds	70 to 100
Post Mold Cure @ 175 °C, hours	4 to 12
Hot Hardness @ 175 °C	87

LOCTITE HYSOL GR 2220 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.

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, °C	161
Coefficient of Thermal Expansion :	
Below Tg, ppm/°C	18.5
Above Tg, ppm/°C	63.3

DMA Modulus:

@ 25°C	N/mm ²	15,808
	(psi)	(2,292,757)
@ 175°C	N/mm ²	4,115
	(psi)	(596,830)
@ 260°C	N/mm ²	1,364
	(psi)	(197,831)
Flexural Modulus @ 25 °C	N/mm ²	10,983
	(psi)	(1,592,949)

Application Specific Properties

Extractable Ionic Content, ppm:	
Chloride (Cl-)	10.4
Sodium (Na+)	3.6
Potassium (K+)	0.7
Volume Resistivity @ 21 °C, 250 Volts, ohms-cm	40.6
Dielectric Constant @ 1 MHz	3.8

GENERAL INFORMATION

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

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

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

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

Disclaimer

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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