



# GR2320

August 2018

## PRODUCT DESCRIPTION

GR2320 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	Black
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"> <li>• Optimum performance</li> <li>• Low moisture absorption</li> <li>• High moldability</li> <li>• Fast cycle time</li> <li>• Lasermark capability</li> <li>• Low ionic impurities</li> <li>• Excellent thermal performance</li> </ul>
<b>Filler Weight, %</b>	71
<b>Typical Package Application</b>	Tantalum capacitor
<b>Application</b>	Molding compound
<b>Flammability</b>	94 V-0

Hysol GR2320 epoxy molding compound delivers outstanding performance and ease of use.

GR2320 meets UL 94 V-0 Flammability at 6.35mm thickness.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Gel Time @ 175 °C, seconds	14
Spiral Flow, @ 175°C, cm	76.2
Shelf Life:	
@ 5°C, months	12

## TYPICAL PROCESS DATA

### Handling

Preheat Temperature, °C	80 to 95
Molding Temperature, °C	140 to 180
Transfer Pressure, Kg/cm <sup>2</sup>	40 to 85
Transfer Time, seconds	6 to 15
Curing Time, 3 mm section:	
Conventional mold:	
@ 175°C, seconds	70 to 90
Automold:	
@ 175°C, seconds	50 to 70
Post Cure @ 175°C, hours	2 to 6

GR2320 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 taken at 25 °C unless otherwise noted. All physical, electrical and analytical measurements taken on specimens cured for 2 minutes @ 175 °C with post cure of 6 hours at 175 °C, unless otherwise specified.

### Physical Properties:

Coefficient of Thermal Expansion, cm/°C :	
Below Tg	20×10 <sup>-6</sup>
Above Tg	75×10 <sup>-6</sup>
Glass Transition Temperature, °C	170
Specific Gravity	1.8
Molded shrinkage, as molded, %	0.25
Flexural Strength Kg/mm <sup>2</sup> :	
@ 25 °C	14
Flexural Modulus Kg/mm <sup>2</sup> :	
@ 25 °C	1,350
Thermal Conductivity, W/mk	0.7
Water Extract Data, 20 hours water boil:	
Conductivity, μmhos/cm	20
pH of extract	6.0
Extractable Ionic Content, ppm:	
Chloride (Cl <sup>-</sup> )	10
Sodium (Na <sup>+</sup> )	4

### Electrical Properties:

Volume Resistivity, ohms-cm, 500 volts:	
@ 25°C	10×10 <sup>15</sup>

## 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 Hysol Huawei 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.

Powder Storage - Powder or preforms 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. Hysol Huawei 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 Hysol Huawei Technical Service Center or Customer Service Representative.

**Note****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. Hysol Huawei 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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