

**Hysol GR2820**

Version LMC20079-M26

Sep, 2018

**PRODUCT DESCRIPTION**

**Hysol GR2820** provides the following characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat Cure
Product Benefits	Green Product Low stress High Tg Good adhesion Excellent thermal cycle performance
Filler Type	Silica
Filler Weight, %	83
Typical Package	Tantalum capacitor
Application	

**Hysol GR2820** is a green epoxy molding compound designed for tantalum capacitor especially for conductive polymer type tantalum capacitors. It delivers outstanding performance and ease of use.

Hysol GR2820 meets UL 94 V-0 flammability at 1/4 inch thickness.

**TYPICAL PROPERTIES OF UNCURED MATERIAL**

Property	Method & Units	Typical Value
Gel time	@175°C,S	20
Spiral flow	@175°C, inch/cm	26/66
Viscosity	@175°C,PaS	35
Specific gravity	g/cm <sup>3</sup>	1.90
Shelf life	@5°C, days	183

**TYPICAL PROCESS DATA**

Handling	Typical Value
Preheat Temperature, °C	80 to 100
Molding Temperature, °C	160 to 190
Transfer Pressure, Kg/cm <sup>2</sup>	40 to 100
Transfer Time, seconds	6 to 18
Curing Time, 3 mm section: @ 175°C, seconds	90 to 120
Post Mold Cure @ 165 to 190 °C, hours	3-6

**Hysol GR2820** 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 3 hours @ 165 °C, unless otherwise specified.

**Physical Properties**

Property, Test methods	Description, units	Typical Value
Coefficient of Linear Thermal Expansion, TMA	Below Tg, ppm/°C Above Tg, ppm/°C	12 45
Glass Transition Temperature, TMA	°C	183
Storage Modulus, DMA	@RT, MPa @175 °C, MPa @260 °C, MPa	18500 5750 1240
Flexural Strength	@ 25°C, MPa	107
Flexural Modulus	@ 25°C, MPa	14000
Adhesion, Tab pull	Cu, PMC Ag, MC	430 440
Moisture Absorption %	PCT 24hrs	0.37%
Extractable Ionic Content, 20hrs	Cl <sup>-</sup> , ppm Na <sup>+</sup> , ppm Br <sup>-</sup> , ppm	7.0 6.6 0
Electronic Conductivity	μs/cm	40
Volume Resistance, 500volt	× 10 <sup>16</sup> Ω.cm	1.6

**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.

**Powder Storage** - Powder or preforms should be stored at -18°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 22 Kg pail is 24 hours.

Material removed from containers may be contaminated during use. Do not return product to the original container. Hysol Huawei Electronics Ltd. 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**



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

#### NOTE

This product is a developmental product. It is not now, and may not be in the future, commercially available. The properties of the uncured material and the physical properties of the cured material have been established as a point of reference only. The information provided in this Lab Data Sheet (LDS) including the recommendations for use and application of the product are based on our best knowledge and experience of the product as at the date of this LDS. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.

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