



## PRODUCT DESCRIPTION

HYSOL GR 2812 provides the following characteristics:

<b>Technology</b>	Epoxy
<b>Cure</b>	Heat cure
<b>Appearance</b>	Golden
<b>Filler Type</b>	Silica
<b>Filler Weight, %</b>	90
<b>Application</b>	Mold Compound
<b>Target Package</b>	Tantalum conductive polymer capacitor
<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• Green product</li><li>• Low stress</li><li>• Low moisture absorption</li><li>• Good electrical performance</li></ul>
<b>Flammability Rating</b>	UL 94 V0 @ 1/8 inch thickness

HYSOL GR 2812 is a green epoxy-based molding compound especially designed for tantalum conductive polymer capacitors. It achieves JEDEC MSL3 requirements at 260 °C reflow temperature.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Spiral Flow, @175°C, inches	29
Gel Time, @175°C, seconds	20
Shelf Life, @ 5°C, days	183
Specific Gravity	2.00

## TYPICAL PROCESS DATA

<b>Handling</b>	<b>Typical Value</b>
Preheat Temperature, conventional mold, °C	70~90
Molding Temperature, °C	170~190
Transfer Pressure, Kg/cm <sup>2</sup>	40~85
Transfer Time @ 175°C, seconds	5~15
Curing Time @ 175 °C, seconds	45~120
Post Mold Cure @ 125~175 °C, hours	4~12

HYSOL GR 2812 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 Hysol Huawei Technical Service for alternative process parameters if needed.

## TYPICAL PROPERTIES OF CURED MATERIAL

All measurements are taken at 25°C unless otherwise noted.

All physical, electrical and analytical measurements are taken on specimens cured for **120** seconds @ **175°C** with post cure of 4 hours @ **125°C**, unless otherwise specified.

## Physical Properties

<b>Property</b>	<b>Typical Value</b>
Glass Transition Temperature, °C: (T <sub>g</sub> ) via TMA	105
Coefficient of Thermal Expansion, TMA, ppm/°C: Below T <sub>g</sub>	7
Above T <sub>g</sub>	29
Flexural Modulus @ 25°C	23,900 (N/mm <sup>2</sup> )
Flexural Strength @ 25°C	150 (N/mm <sup>2</sup> )
DMA Modulus: @ 25 °C	28,680 (N/mm <sup>2</sup> )
@ 175 °C	1,363 (N/mm <sup>2</sup> )
@ 260 °C	1,221 (N/mm <sup>2</sup> )
Moisture Absorption, 24 hours PCT, %	0.25

## Application Specific Properties

Extractable Ionic Content @ 100 °C, after 20 hours extract, ppm:	
Chloride (Cl <sup>-</sup> )	7.7
Sodium (Na <sup>+</sup> )	2.7
Volume Resistivity @ 21 °C, 500 Volts, ohms-cm	30x10 <sup>15</sup>

## 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 Hysol Huawei Electronics Co., Ltd. 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.

Optimal Storage: 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 Electronics Co., 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 Hysol Huawei Electronics Co., Ltd. Technical Service or Customer Service Representative.

### 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 best knowledge and experience of the product as at the date of this TDS. Hysol Huawei Electronics Co., Ltd. is, 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 regarding the concerned product is excluded.