



Technical Data Sheet  
**HYSOL GR 700(FM)**

March 2020

### PRODUCT DESCRIPTION

HYSOL GR 700(FM) is a green, semiconductor grade mold compound providing the following product characteristics:

<b>Technology</b>	Epoxy
<b>Cure</b>	Heat
<b>Appearance</b>	Black
<b>Filler Type</b>	Silica
<b>Filler Weight, %</b>	87 ± 1
<b>Application</b>	Mold Compound
<b>Target Package</b>	TO, SOIC, TSOP, QFP, PQFN
<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• Halogen free</li><li>• Low stress</li><li>• High adhesion</li><li>• Low moisture absorption</li><li>• High reliability</li><li>• Good electrical performance</li></ul>
<b>Flammability Rating</b>	UL 94 V0 @ 1/8 inch thickness

HYSOL GR 700(FM) is a green epoxy-based molding compound especially designed for high power device package applications..

### TYPICAL PROPERTIES OF UNCURED MATERIAL

Spiral Flow, @175°C, inches	42
Gel Time, @175°C, seconds	27
Shelf Life, @ 5°C, days	183
Specific Gravity	1.97

### TYPICAL PROCESS DATA

<b>Handling</b>	<b>Typical Value</b>
Preheat Temperature, conventional mold, °C	70~90
Molding Temperature, °C	170~185
Transfer Pressure, Kg/cm <sup>2</sup>	40~85
Transfer Time @ 175°C, seconds	7~15
Hot Hardness, Shore D @ 175 °C, after 90sec	79
Curing Time @ 175 °C, seconds	90~120
Post Mold Cure @ 175 °C, hours	4~8

HYSOL GR 700(FM) 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 6 hours @ **175°C**, unless otherwise specified.

### Physical Properties

Property	Typical Value
Glass Transition Temperature, °C: (Tg) via TMA	118
Loss modulus peak @ DMA	117
Tan δ peak @ DMA	125
Coefficient of Thermal Expansion, TMA, ppm/°C:	
Below Tg	8
Above Tg	27
Flexural Modulus @ 25°C	18871 (N/mm <sup>2</sup> )
Flexural Strength @ 25°C	151 (N/mm <sup>2</sup> )
Moisture Absorption, 24 hours PCT, %	0.28

### Application Specific Properties

Thermal Conductivity, W/(m-K)	0.9
pH of extract @ 100 °C, after 20 hours	5.8
Extractable Ionic Content @ 100 °C, after 20 hours extract, ppm:	
Chloride (Cl-)	9
Sodium (Na+)	3
Volume Resistivity @ 21 °C, 500 Volts, ohms-cm	37×10 <sup>15</sup>
Dielectric Constant @ 1MHz	3.8

### 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.

### Conversions

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

**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 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.