



# HYSOL MG 15F-35A

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## PRODUCT DESCRIPTION

HYSOL MG 15F-35A provides the following product characteristics:

<b>Technology</b>	Epoxy
Appearance	Black
<b>Cure</b>	Heat cure
Product Benefits	<ul style="list-style-type: none"><li>• Good electrical stability</li><li>• High temperature stability</li></ul>
Typical Package Application	Power discrete and High voltage rectifier
<b>Application</b>	Molding compound
Flammability	94 V0

HYSOL MG 15F-35A epoxy molding compound delivers outstanding performance and ease of use. LOCTITE HYSOL MG 15F-35A is an anhydride cured molding compound designed specifically for use in high voltage power applications requiring good electrical stability at high temperature.

HYSOL MG 15F-35A meets UL 94 V-0 Flammability at 3mm thickness.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Gel Time @ 177 °C, seconds	20
Spiral Flow, @ 177°C, cm/in	64/25
Shelf Life: @ 5°C, days	365

## TYPICAL PROCESS DATA

### Handling

Preheat Temperature :	
Conventional mold, °C	77 to 94
Molding Temperature, °C	175 to 200
Molding Pressure, Kg/cm <sup>2</sup>	42 to 85
Transfer Time, seconds	6 to 15
Curing Time, 3 mm section:	
@ 175 °C, seconds	60 to 75
@ 190 °C, seconds	45 to 60
Post Cure Time, hours:	
@ 175°C	8 to 12
@ 190°C	2 to 4

HYSOL MG 15F-35A 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 21 °C unless otherwise noted. All physical, electrical and analytical measurements taken on specimens cured for 2 minutes @ 177 °C with post cure of 4 hours at 177 °C, unless other wise specified.

### Physical Properties:

Coefficient of Thermal Expansion , ppm/°C:	
Below Tg	21
Above Tg	70
Glass Transition Temperature, °C	190
Specific Gravity	1.81
Molded shrinkage, as molded, %	0.5
Flexural StrengthKg/mm <sup>2</sup> : @ 21 °C	12.33
Flexural ModulusKg/mm <sup>2</sup> : @ 21 °C	1,550
Thermal Conductivity, CGS units	17×10 <sup>-4</sup>
Moisture Absorption @ 1 Atm steam, %:	
100 hours	0.7
1,000 hours	0.9
Water Extract Data, 1.5 hour water boil:	
Conductivity, micro mhos	20
pH of extract	4.5
Extractable Ionic Content, ppm:	
Chloride (Cl <sup>-</sup> )	20
Sodium (Na <sup>+</sup> )	20

**Electrical Properties:**

Volume Resistivity, ohms-cm, 500 volts:  
 @ 21°C  $1.8 \times 10^{17}$   
 100 hours @ 1 Atm  $6 \times 10^{13}$

Dielectric Strength, volts/mil 1,400

Dielectric Constant @ 23°C :

100 Hz 3.98  
 1 KHz 4.0  
 100 KHz 3.94

Dielectric Constant @ 200°C :

100 Hz 4.08  
 1 KHz 3.99  
 100 KHz 3.9

Dissipation Factor @ 23°C:

100 Hz 0.004  
 1 KHz 0.004  
 100 KHz 0.008

Dissipation Factor @ 200°C:

100 Hz 0.021  
 1 KHz 0.012  
 100 KHz 0.003

**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.

**TRADEMARK USAGE**

Except as otherwise noted, all trademarks in this document are trademarks of Hysol Huawei in P.R.C and elsewhere.

**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 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.

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 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 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 your local Technical Service Center or Customer Service Representative.