Technical Data Sheet

# HYSOL MG 15F-MOD2

February 2018

## PRODUCT DESCRIPTION

HYSOL MG 15F-MOD2 provides the following product characteristics:

| | |
|---|---|
| **Technology** | Epoxy |
| Appearance | Black |
| **Cure** | Heat cure |
| Product Benefits | • High Tg<br>• Low stress<br>• Green semiconductor grade |
| Typical Package Application | Asymmetric and Surface mount packages |
| **Application** | Molding compound |
| Flammability | UL94 V0 |

HYSOL MG 15F-MOD2 epoxy molding compound designed specifically for use in high temperature and high speed RF applications.

HYSOL MG 15F-MOD2 meets UL 94 V0 flammability rating at 6mm thickness.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

| | |
|---|---|
| Gel Time , seconds | 22 |
| Spiral Flow, @ 177°C, cm | 90 |
| Shelf Life @ 5ºC , days | 365 |

## TYPICAL PROCESS DATA

### Handling

| | |
|---|---|
| Preheat Temperature, conventional mold, ºC | 80 to 110 |
| Molding Temperature, °C | 175 to 200 |
| Molding Pressure, kg/mm² | 0.56 to 1.05 |
| Transfer Time, seconds | 5 to 12 |
| Curing Time, 3 mm section: | |
| @ 177ºC, seconds | 60 to 75 |
| @ 190ºC, seconds | 45 to 60 |
| Post Cure Time, hours: | |
| @ 175 °C | 8 to 12 |
| @ 190 °C | 2 to 4 |

HYSOL MG 15F-MOD2 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 @ 190 °C with post cure of 2 hours at 190 °C, unless otherwise specified.

### Physical Properties

| | | |
|---|---|---|
| Coefficient of Thermal Expansion , ppm/°C: | | |
| @ 50 to 100ºC | | 14 |
| @ 250 to 260ºC | | 55 |
| Glass Transition Temperature, °C | | 235 |
| Specific Gravity | | 1.95 |
| Molded shrinkage, as molded, % | | 0.17 |
| Flexural Strength | N/mm² | 118 |
| | (psi) | (17,114) |
| Flexural Modulus | N/mm² | 16,660 |
| | (psi) | (2,416,329) |
| Thermal Conductivity, W/(m-K) | | 0.84 |
| Extractable Ionic Content, ppm: | | |
| Chloride (Cl-) | | 6.1 |
| Sodium (Na+) | | 5.4 |
| Moisture Absorption , 168 hours @ 85ºC/85% RH, % | | 0.37 |
| Water Extract Data, 1.5 hours water boil: | | |
| Conductivity, µmhos/cm | | 10 |
| pH of extract | | 4.2 |

### Electrical Properties

| | |
|---|---|
| Volume Resistivity@ 500 Volts, ohms-cm: | |
| @ 21 °C | $1\times10^{17}$ |
| @ 100 °C | $2.9\times10^{16}$ |

## 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 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 5ºC 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 Huaweil Technical Service Center 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 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**