



# HYSOL MG 15F-0140B

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## PRODUCT DESCRIPTION

MG 15F-0140B provides the following characteristics:

|                                    |   |
|------------------------------------|---|
| <b>Technology</b>                  | Epoxy   |
| <b>Appearance</b>                  | Black   |
| <b>Cure</b>                        | Heat cure   |
| <b>Product Benefits</b>            | <ul style="list-style-type: none"> <li>• High voltage performance</li> <li>• Good electrical stability</li> </ul> |
| <b>Typical Package Application</b> | Power discrete and High voltage rectifier   |
| <b>Application</b>                 | Molding compound  |
| <b>Flammability</b>                | UL94 V0   |

MG 15F-0140B is an anhydride cured molding compound designed specifically for use in high voltage power applications requiring good electrical stability at high temperature.

MG 15F-0140B meets UL 94 V-0 Flammability at 3 mm thickness.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

|                               |       |
|-------------------------------|-------|
| Gel Time @ 175 °C, seconds    | 18    |
| Spiral Flow, @ 175°C, inch/cm | 22/56 |
| Shelf Life @ 5°C, days        | 365   |

## TYPICAL PROCESS DATA

| Handling                                   | Value      |
|--|------------|
| Preheat Temperature, Conventional mold, °C | 77 to 94   |
| Molding Temperature, °C                    | 177 to 200 |
| Molding Pressure, kgf/cm <sup>2</sup>      | 42 to 84   |
| Transfer Time, seconds                     | 6 to 15    |
| Curing Time, 3 mm section:                 |            |
| @ 177°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     |

MG 15F-0140B 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: | Typical Value |
|---|---------------|
| @ Below Tg                                | 22            |
| @ Above Tg                                | 57            |
| Glass Transition Temperature, °C (TMA)    | 185           |
| Specific Gravity                          | 1.81          |
| Molded shrinkage, %                       | 0.34          |
| Flexural Strength, MPa                    | 115           |
| Flexural Modulus, MPa                     | 10300         |
| Extractable Ionic Content, ppm:           |               |
| Chloride (Cl <sup>-</sup> )               | 9.9           |
| Sodium (Na <sup>+</sup> )                 | 5.0           |

### Electrical Properties

|  |                      |
|--|----------------------|
| Volume Resistivity @ 500 Volts, ohms-cm: |                      |
| @ 21 °C                                  | 4.3×10 <sup>16</sup> |

## GENERAL INFORMATION

**For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).**

### Not for product specifications

The laboratory 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 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 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 Technical Service Center or Customer Service Representative.

## **Disclaimer**

### **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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