



Hysol[®] MG15F-MOD2

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PRODUCT DESCRIPTION

Hysol[®] MG15F-MOD2 is a very high Tg, low stress, green semiconductor grade, epoxy molding compound designed specifically for use in asymmetric and surface mount packages; specifically with high temperature power, and high speed RF applications. Because of its extremely high glass transition temperature and the use of advanced Sigma Technology, MG15F-MOD2 has proven superior performance in high temperature, high power and high frequency applications. The lower stress levels inherent in MG15F-MOD2 also allow for superior performance on very large, thin devices. The combination of high temperature stability, low stress and superior adhesion results in power cycling performance on high frequency devices three times better than the nearest competitor.

MG15F-MOD2, through the use of both anhydride chemistry and spherical filler combines the historical high temperature stability and adhesion attributes of anhydride chemistry, with the superior moldability, low stress characteristics and handling performance of standard surface mount molding compounds.

In addition, MG15F-MOD2 is environmentally friendly, using no halogen, elemental phosphorous or heavy metal flame retardants to achieve its 6 mil UL flame rating.

PROPERTIES OF UNCURED MATERIAL

Color	Black
Spiral Flow, @ 177°C, cm	90
Ram Follower Gel Time, seconds	10
Shelf Life @ 5°C, months	12

TYPICAL CURED PROPERTIES

All measurements taken at 21°C unless otherwise noted. All physical, electrical and analytical measurements taken on specimens cured for two minutes at 190°C with post cure of 2 hours at 240°C, unless otherwise specified.

Glass Transition Temperature, °C	235
Coefficient of Thermal Expansion, ppm/°C	
50° - 100°C	14
250° - 260°C	55
Specific Gravity	1.95
Molded Shrinkage, as molded, %	0.17
Flexural Strength, kg/mm ²	12
Flexural Modulus, kg/mm ²	1700
Thermal Conductivity, W/mK	0.84
Flammability Rating @ 6mm thickness	V-0
Moisture Absorption, 85°C/85%RH, %	
168 hours	0.37
Volume Resistivity, 500 volts, ohm-cm	
@ 21°C	1 x 10 ¹⁷
@ 100°C	2.9 x 10 ¹⁶
Water Extract Data, 1.5 hour water boil,	
conductivity, micromhos	10
pH of extract	4.2
chloride content, ppm	2
sodium content, ppm	2

HANDLING

MG15F-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 below.

Preheat Temperature, conventional mold, °C	80-110
Molding Temperature, °C	175-200
Molding Pressure, kg/mm ²	0.56-1.05
Transfer Time, seconds	5-12
Curing Time, 3mm section, seconds	
@ 177°C	60-75
@ 190°C	45-60
Post Cure Time, hours	
@ 177°C	12
@ 200°C	8
@ 240°C	2

GENERAL INFORMATION

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

STORAGE

Powder Storage – Powder or performs 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.

DATA RANGES

The data contained herein may be reported as a typical value and/or range values based on actual test data and are verified on a periodic basis.

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.

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