



# HYSOL MG 33F-0520

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## PRODUCT DESCRIPTION

HYSOL MG 33F-0520 provides the following product characteristics:

<b>Technology</b>	Epoxy
<b>Appearance</b>	Gold
<b>Cure</b>	Heat cure
<b>Product Benefits</b>	<ul style="list-style-type: none"><li>• Green product</li><li>• Low moisture absorption</li><li>• Excellent moldability</li><li>• Fast cycle time</li><li>• Lasermark capability</li><li>• Low levels of ionic contaminants</li><li>• Thermal cycling stability</li></ul>
<b>Typical Package Application</b>	Tantalum capacitor
<b>Application</b>	Molding compound

HYSOL MG 33F-0520 is a specially formulated product designed for use in high volume molding of tantalum capacitors.

HYSOL MG 33F-0520 meets UL 94 V-0 Flammability rating.

## TYPICAL PROPERTIES OF UNCURED MATERIAL

Gel Time @ 177 °C, seconds	14
Spiral Flow, @ 177°C, cm	64
Shelf Life:	
@ 5°C, days	213

## TYPICAL PROCESS DATA

<b>Handling</b>	
Molding Temperature, °C	145 to 177
Molding Pressure, psi	500 to 1,500
Curing Time, 0.806 cm section:	
@ 170°C, seconds	30 to 45
@ 150°C, minutes	1.0 to 1.5
Post Cure @ 150°C, hours	2

HYSOL MG 33F-0520 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 2 hours at 177 °C, unless otherwise specified.

### Physical Properties

Coefficient of Thermal Expansion, ppm/°C:	
Below Tg	20
Above Tg	70
Glass Transition Temperature, °C	170
Specific Gravity	1.87
Tensile Strength:	
@ 21 °C	N/mm <sup>2</sup> 100 (psi) (14,500)

Tensile Modulus:	
@ 21 °C	N/mm <sup>2</sup> 7,580 (psi) (1.1×10 <sup>6</sup> )

Flexural Strength:	
@ 21 °C	N/mm <sup>2</sup> 141 (psi) (20,500)

Flexural Modulus:	
@ 21 °C	N/mm <sup>2</sup> 19,300 (psi) (2.8×10 <sup>6</sup> )

Water Extract Data, 20 hour water boil:	
Chloride (Cl-) content, ppm	2.0
Sodium (Na+) content, ppm	1.5
Water Extract Conductivity, ohm	2.1×10 <sup>-5</sup>
pH of extract	6.5

### Electrical Properties

Dielectric Constant @ 25°C :	
@ 100Hz	4.3
@ 100kHz	4.1
Dissipation Factor @ 25°C:	
@ 100Hz	0.004
@ 100kHz	0.018
Volume Resistivity, ohms/cm, 100 volts	1.25×10 <sup>-16</sup>
Surface Resistivity, ohms/cm, 100volts	1.65×10 <sup>-16</sup>

## 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 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 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 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.