

**PRODUCT DESCRIPTION**

KL1000-3A provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Cure	Heat cure
Product Benefits	<ul style="list-style-type: none"> • High reliability • High moldability • Low cost of ownership
Filler Weight, %	75
Typical Package	ZIP, SIL, DIP and Discrete devices
Application	
Application	Molding compound
Flammability	94 V-0
Flame Retardant	Br or Sb

Hysol[®] KL1000-3A provides the lowest cost of ownership with superior moldability and reliability.

KL1000-3A meets UL 94 V-0 Flammability at 3.175mm thickness.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Gel Time @ 175 °C, seconds	23
Spiral Flow, @ 175°C, cm	80
Shelf Life:	
@ 5°C, months	12

TYPICAL PROCESS DATA**Handling**

Preheat Temperature :	
Conventional mold, °C	80 to 100
Automold, seconds	0 to 5
Molding Temperature, °C	150 to 195
Molding Pressure, Kg/cm ²	40 to 100
Transfer Time:	
Conventional mold, seconds	10 to 18
Automold, seconds	4 to 10
Curing Time, @ 175°C:	
Conventional mold, seconds	50 to 120
Automold, seconds	50 to 80
Post Cure @ 175°C, hours	4 to 6

KL1000-3A 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 25 °C unless otherwise noted. All physical, electrical and analytical measurements taken on specimens cured for 2 minutes @ 175 °C with post cure of 6 hours at 175 °C, unless other wise specified.

Physical Properties:

Coefficient of Thermal Expansion, cm/°C :	
Below Tg	25×10 ⁻⁶
Above Tg	77×10 ⁻⁶
Glass Transition Temperature, °C	165
Specific Gravity	2.0
Molded shrinkage, as molded, %	0.35
Flexural Strength Kg/mm ² :	
@ 25 °C	14.5
Flexural Modulus Kg/mm ² :	
@ 25 °C	1,300
Thermal Conductivity, W/mk	1.3
Moisture Absorption, %:	
168 hours @ 85°C/85% RH	0.2
Water Extract Data, 20 hours water boil:	
Conductivity, μmhos/cm	22
pH of extract	4.9
Extractable Ionic Content, ppm:	
Chloride (Cl-)	7
Sodium (Na+)	3

Electrical Properties:

Volume Resistivity, ohms-cm, 250	volts:	
@ 25°C		35×10 ¹⁵

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 Electronics Co., Ltd. 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

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