



EO1035

November 2009

PRODUCT DESCRIPTION

EO1035 provides the following product characteristics:

Technology	Epoxy
Appearance	Black
Filler Weight, %	65
Components	One component
Product Benefits	• High purity • High Tg • Very low toxicity • Low hydrozable chloride • Excellent thermal shock resistance
Cure	Heat cure
Application	Encapsulant

EO1035 encapsulant is an anhydride cured liquid epoxy designed to retain electrical properties after long-term moisture or 85/85 exposure.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity @ 25 °C, mPa-s (cP):	
Spindle 6, speed 20 rpm	10,000 to 25,000
Gel Time, minutes:	
@ 121°C	13.5
@ 100°C	47.6
Shelf Life @ -40°C, months	9
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

- 1 hour @ 130°C plus
- 3 hours @ 160°C

The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion in/in/°C:	
Below Tg (40 to 140°C)	32×10 ⁻⁶
Above Tg (200 to 290°C)	90×10 ⁻⁶
Glass Transition Temperature (Tg) by TMA, °C	160
Shore Hardness, ISO 868, Durometer D	90 to 92
Thermal Conductivity, cal/cm x sec °C	17×10 ⁻⁴
Extractable Ionic Content, %:	
Hydrolyzable chloride	<0.01
Nitrogen	≤0.01
Flexural strength, ASTM D790	N/mm ² 55.2
	(psi) (8,000)
Linear Shrinkage, %	0.4
Moisture Absorption, %	0.08

Specific Gravity	1.88
Water Extract Conductivity, micro mhos:	
90 minute reflux	35
pH of extract	8.9

Electrical Properties:

Volume Resistivity, IEC 60093, Ω-cm	4.3×10 ¹⁴
Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	5.2 / 0.004
1 KHz	5.16 / 0.005
10 KHz	5.12 / 0.007
100 KHz	5.06 / 0.009
Dielectric Strength, @ 0.05" thickness, volts/mil	460

TYPICAL PERFORMANCE OF CURED MATERIAL

Physical Properties:

Tensile Strength, ISO 527-2	N/mm ² 57.5
	(psi) (8,400)
Compressive Strength, ASTM-D695	N/mm ² 150.7
	(psi) (22,000)
Lap Shear Strength, ISO 4587:	
	N/mm ² 13.8
	(psi) (2,000)

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 used with chlorine or other strong oxidizing materials.

THAWING:

1. Allow container to reach room temperature before use.
2. After removing from the freezer, set the syringes to stand vertically while thawing.
3. DO NOT re-freeze. Once thawed, the adhesive should not be re-frozen.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local 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.

Optimal Storage: -40°C. Storage below -40°C or greater than minus -40°C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation 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 your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{N/mm}^2 \times 145 = \text{psi}$

$\text{MPa} \times 145 = \text{psi}$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

Note

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Reference 0.0