



HYSOL[®] ES0620[™]

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PRODUCT DESCRIPTION

HYSOL[®] ES0620[™] provides the following product characteristics:

Technology	Epoxy
Appearance (cured)	Clear
Components	Two component - requires mixing
Mix Ratio, by volume - Part A: Part B	2 : 1
Mix Ratio, by weight - Part A: Part B	100 : 46
Cure	Room temperature cure
Application	Potting and Encapsulating

HYSOL[®] ES0620[™] is a two-component casting system with excellent handling properties. This low cost, flexible system is filled with a non-abrasive filler for machine metering/dispensing or regular hand mixer applications. HYSOL[®] ES0620[™] is a transparent, medium-viscosity epoxy resin formulation recommended for small potting and laminating applications where clarity and excellent structural, mechanical and electrical properties are required. This two-part adhesive exhibits good wetting, cures at room temperature and develops strong, low shrinkage bonds to most materials including optical fibers, glass ceramics, most metals and many rigid plastics. It has excellent dimensional stability over a wide temperature range. Fully cured, it is a durable electrical insulator with good physical properties, and excellent chemical resistance. This product is typically used in applications with an operating range of -60 °C to +125 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Density, @ 25 °C, g/cm ³	1.15
Viscosity @ 25 °C, mPa·s (cP)	8,350

Part B Properties

Density, @ 25 °C, g/cm ³	1.06
Viscosity @ 25 °C, mPa·s (cP)	3,000

Mixed Properties

Pot Life @ 25 °C, minutes:	
100 g mass	8 to 10
Gel Time @ 25 °C, minutes:	
100 g mass	12 to 15
Viscosity @ 25 °C, mPa·s (cP)	6,000

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

- 12 to 24 hours @ 25 °C (Recommended cure)
- 2 hours @ 65 °C (Alternate cure)
- 1 hour @ 100 °C (Alternate cure)

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Glass Transition Temperature, ISO 11357-2, °C	80
Coefficient of Thermal Expansion ASTM D7012, K ⁻¹ :	
Pre Tg (Alpha 1)	68×10 ⁻⁶
Post Tg (Alpha 2)	190×10 ⁻⁶
Shore Hardness, ISO 868, Durometer D	90
Water Absorption, ISO 62, %:	
24 hours in water @ 25 °C	0.3
Elongation, ISO 527-2, %	6

Tensile Strength Tests - Hysol:

Tensile Strength, ISO 527-2	N/mm ²	68.3
	(psi)	(9,900)
Compressive Strength, ISO 604	N/mm ²	131.0
	(psi)	(19,000)
Flexural Strength, ISO 178	N/mm ²	100
	(psi)	(14,500)

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1, kV/mm	64.6
Volume Resistivity, IEC 60093, Ω·cm:	
@ 25 °C	3×10 ¹⁶
Surface Resistivity, IEC 60093, Ω:	
@ 25 °C	3×10 ¹⁶
Dielectric Constant / Dissipation Factor, IEC 60250:	
@ 25 °C:	
1 kHz	4.0 / 0.009

GENERAL INFORMATION

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

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: 20 °C to 30 °C. Storage below 20 °C or greater than 30 °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 1.2