



HYSOL ES0506 AB

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PRODUCT DESCRIPTION

HYSOL ES0506 AB provides the following product characteristics:

Technology	Epoxy
Components	Two component - requires mixing
Appearance - Part A	Gray
Appearance - Part B	Amber
Mix Ratio, by volume - Part A: Part B	100 : 35.7
Mix Ratio, by weight - Part A: Part B	100 : 25.4
Cure	Heat cure
Application	Encapsulant and Potting

HYSOL ES0506 AB is a two-component, filled epoxy system designed for vacuum impregnation applications as well as for general potting and encapsulating.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties :

Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 7, speed 10 rpm	30,000
Density @ 25°C, gm/cc	1.7
Filler Content, %	63
Solids Content, %	100
Shelf Life @ 25°C (from date of manufacture), months	12
Flash Point - See MSDS	

Part B Properties:

Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 1, speed 20 rpm	60
Density @ 25°C, gm/cc	1.21
Filler Content, %	0
Solids Content, %	100
Shelf Life @ 25°C (from date of manufacture), years	1
Flash Point - See MSDS	

Mixed Properties:

Viscosity, mPa·s (cP):	
Spindle 4, speed 2 rpm, @ 25°C	3,300
Spindle 3, speed 20 rpm, @ 75°C	180
Pot Life @ 25°C, 200 gm mass, hours	>8
Sunshine Gel @ 100°C, minutes	47
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended Cure Schedule

3 hours @ 85°C plus 1 hour @ 125°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:

Appearance	Brown/Tan
Filler Content, %	48
Linear Shrinkage, %	0.88
Density, gm/cc	1.79
Specific Gravity	1.76
Glass Transition Temperature (Tg) by TMA, °C	75
Coefficient of Thermal Expansion :	
@ 40 to 60°C, µm/m.°C	81
@ 110 to 130°C, µm/m.°C	228
Hardness, Shore D	90
Elongation, %	1.5

Electrical Properties:

Volume Resistivity, ohms-cm:	
@ 23 °C	9×10 ¹⁵
@ 100 °C	1×10 ¹⁴
Dielectric Strength, 20 mil thickness, volts/mil	1,250
Dielectric Constant / Dissipation Factor:	
@ 23 °C:	
@ 1KHz	3.7/0.0047
@ 10KHz	3.7/0.0045
@ 100 °C:	
@ 1KHz	4.2/0.039
@ 10KHz	4.0/0.0024

TYPICAL PERFORMANCE OF CURED MATERIAL

Miscellaneous:

Tensile Strength	N/mm ²	54
	(psi)	(7,880)

GENERAL INFORMATION

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

DIRECTIONS FOR USE

1. Complete cleaning of the components and substrates should be performed to remove contamination such as dust, moisture, salt and oils which can cause electrical failure, poor adhesion or corrosion in an embedded part.
2. Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.

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 in original, tightly covered containers in clean, dry areas. Storage information may be indicated on the product container labeling.

Optimal Storage : 25 °C

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