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Technical Data Sheet

LOCTITE 3131

March 2012

PRODUCT DESCRIPTION

LOCTITE 3131 provides the following product characteristics:

Technology	Epoxy/Acrylate
Appearance	Amber
Product Benefits	• Dual cure
Cure	Ultraviolet (UV) light, Heat cure
Application	Assembly
Typical Assembly Applications	Image sensor module assemblies

LOCTITE 3131 dual cure adhesive is designed for use in the assembly of temperature sensitive electronic components. The maximum performance of this material is achieved by exposure to UV light of suffecient intensity, followed by thermal cure.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Viscosity, HAAKE PK-100, Cone PK 1 2°, mPa·s (cP): @ 25°C	14,000
Yield Point @ 25 °C, mPa·s (cP)	9,013
Thixotropic Index (2/20 s^{-1})	1.6
Specific Gravity	1.23
Pot life @ 25 °C, days	>14
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended UV Cure

Light Source and Condition:	
Medium pressure mercury lamp	
UV Wavelength, nm	220 to 260
Light Intensity, mW/cm²	100
UV Tack-Free Time, seconds	1

Recommended Heat Cure

30 minutes @ 60°C
25 minutes @ 70°C
20 minutes @ 80°C

The above cure profile is a guideline recommendation. Cure rate and ultimate depth of cure depend on light intensity, spectral distribution of light source, exposure time and the light transmittance of the substrate.

With all fast cure systems, the minimum required time for cure depends on the rate of heating. Cure rate depends on the mass of the material to be heated and intimate contact with the heat source. Use suggested cure conditions as general guidelines. Other cure conditions may yield satisfactory results.

TYPICAL PROPERTIES OF CURED MATERIAL

Sample cured 5 secs @ 100 mW/cm² plus 30 min @ 80°C

Physical Properties:

Hardness, Shore D, ASTM D2240	88
Glass Transition Temperature (Tg) by TMA, °C	85
Coefficient of Thermal Expansion :	
Alpha 1, cm/cm/°C	49×10^{-6}
Alpha 2, cm/cm/°C	175×10^{-6}
Volume Shrinkage on Cure, %	2.4
Linear Shrinkage on Cure, %	1.3

TYPICAL PERFORMANCE OF CURED MATERIAL

Sample cured 2 secs @ 100 mW/cm² plus 30min @ 80°C

Lap Shear Strength :		
Polycarbonate	N/mm²	1.8
	(psi)	(261)

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 : 2 to 8 °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.

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Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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chanhvinh.com
chanhvinh.com
chanhvinh.com

Americas
+1.888.943.6535

Europe
+44.1442.278.000

Asia
+86.21.3898.4800

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