



LOCTITE® 3862™

February 2007

PRODUCT DESCRIPTION

LOCTITE® 3862™ provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Components	Two part - Resin & Hardener
Appearance (Resin)	Black liquid ^{LMS}
Appearance (Hardener)	Clear to amber liquid ^{LMS}
Viscosity	Medium
Cure	Heat cure
Application	Potting, Encapsulating or Casting
Other Application Areas	Thermal conduction
Key Substrates	Electronic components

LOCTITE® 3862™ is a medium viscosity electronic potting system designed to provide superior thermal shock resistance and high thermal conductivity. This product is an epoxy/anhydride system that cures at elevated temperatures and exhibits low shrinkage properties.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	2.2
Viscosity, Brookfield - resin, 25 °C, mPa·s (cP):	
Spindle 7, speed 5 rpm	50,000 to 75,000 ^{LMS}
Viscosity @ 25°C, mPa·s (cP):	
After mixing, extrusion	20,000
Mix Ratio, Resin:Hardener:	
By weight	100:28
Flash Point - See MSDS	

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

120 minutes @ 130 °C

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 2 hours @ 130 °C

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2,	30×10 ⁻⁶
K ⁻¹	
Coefficient of Thermal Conductivity, ISO 8302,	1.1
W/(m·K)	
Glass Transition Temperature, ISO 11357-2, °C	153
Tensile Strength, ISO 527-3	N/mm ² ≥34.5
	(psi) (≥5,000)
Tensile Modulus, ISO 527-3	N/mm ² 2,759
	(psi) (400,000)
Elongation, ISO 527-3, %	6.4
Shore Hardness, ISO 868, Durometer D	≥75 ^{LMS}

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1,	17.7
kV/mm	

GENERAL INFORMATION

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.

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

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

If supplied as separate containers of parts A and B, store at room temperature. If supplied pre-mixed and frozen, store at -40 °C. Shelf life will vary with speciality packages. 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.

Loctite Material Specification^{LMS}

LMS dated July 27, 2001. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

Conversions

(°C x 1.8) + 32 = °F
 kV/mm x 25.4 = V/mil
 mm / 25.4 = inches
 μm / 25.4 = mil
 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

Note

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Reference 0.0