



3900™

January 2008

PRODUCT DESCRIPTION

3900™ provides the following product characteristics:

Technology	Acrylic
Chemical Type	Acrylic resin
Appearance (uncured)	Transparent, colorless to slightly amber solution ^{LMS}
Components	One component - requires no mixing
Cure	Room temperature cure
Application	Conformal coating
Specific Benefit	<ul style="list-style-type: none"> • High dielectric strength • Fast drying • Precision spray nozzle • Contains no CFC's

3900™ is a clear acrylic formulated without chlorinated solvents or CFC's. The coating is spray-applied and air dries tack-free in five minutes to provide a tough environmental and solvent-resistant coating. The material provides protection of printed circuit boards, electronic components, thick-film circuits and other substrates. This product is typically used in applications with an operating range of -40 °C to +125 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.14
Flash Point - See MSDS	

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties

Water Vapor Trans. Rate, ASTM E96, g/(h·m ²)	0.325
Shore Hardness, ISO 868, Durometer D	60
Elongation, ISO 527-3, %	1.5
Tensile Strength, ISO 527-3	N/mm ² 5.9 (psi) (850)
Tensile Modulus, ISO 527-3	N/mm ² 586 (psi) (85,000)

Electrical Properties

Volume Resistivity, IEC 60093, Ω·cm	7.21×10 ¹⁵
Surface Resistivity, IEC 60093, Ω	1.88×10 ¹⁷
Dielectric Breakdown Strength, IEC 60243-1, kV/mm	65
Dielectric Constant / Dissipation Factor, IEC 60250:	
100 Hz	3.37 / 0.062
1 kHz	3.07 / 0.052

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).

Directions for use

1. Surface should be free of flux, grease, ionic residue or any other contaminates. Mask board if required.
2. Shake can thoroughly before use.
3. Spray board 15 to 20 cm from surface with even motion.
4. Rotate board and repeat application 2-3 times for best coverage.
5. Application with PCB in horizontal position recommended for even coating.
6. A coating of 0.05 to 0.07 mm will air dry tack-free within 5 minutes @ 22 °C and 40 to 60 %RH. Full cure requires 24 hours @ 22 °C.
7. Cured coatings may be removed by soaking in acetone. Component replacement may be accomplished by localized desoldering/soldering through the coating and reapplication.

Loctite Material Specification^{LMS}

LMS dated April 26, 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.

Storage

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

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °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

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Note

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Reference 1.1