Technical Data Sheet

LOCTITE SI 5296

September 2017

PRODUCT DESCRIPTION

LOCTITE SI 5296 provides the following product characteristics:

Technology	Silicone
Chemical Type	Silicone
Appearance (uncured)	Clear to translucent liquid, Free of cured material and particulates[LMS]
Fluorescence	Positive under UV light[LMS]
Components	One component - requires no mixing
Cure	Heat cure
Application	Conformal coating

LOCTITE SI 5296 is designed to provide environmental protection for printed circuit boards and other sensitive electronic components. It is designed to be applied by a variety of selective robotic dispense methods and can also be applied via brush, dip or manual spray.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.0
Solids/Non-Volatile Content, %	90
Flash Point - See SDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 1, speed 20 rpm	150 to 235[LMS]

TYPICAL CURING PERFORMANCE

LOCTITE SI 5296 becomes tack free (2 to 5 mil thick coating) by using IR or forced hot air convection with one of the following thermal excursions:

Cure Schedule

@ 125 °C, 7 minutes
@ 108 °C, 13 minutes

Isothermal DSC Conversion

10 minutes @ 105 °C, % ≥90[LMS]

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 45 minutes @ 125 °C using a convection oven

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K^{-1}		355×10^{-6}
Coefficient of Thermal Conductivity, ISO 8302, W/(m·K)		0.19
Glass Transition Temperature, ASTM E 228, °C		-49
Water Vapor Trans. Rate, ASTM E96, g/(h·m²)		1.22 to 1.29
Shore Hardness, ISO 868, Durometer OO		38
Elongation, ISO 37, %		75
Tensile Strength, ISO 37	N/mm² (psi)	0.1 (14.5)

Electrical Properties:

Dielectric Constant / Dissipation Factor, IEC 60250:	
1 kHz	2.77 / 0.006
100 kHz	2.76 / 0.006
1 MHz	2.76 / 0.006
Volume Resistivity, IEC 60093, Ω·cm	1.9×10^{13}
Surface Resistivity, IEC 60093, Ω	2.3×10^{15}
Dielectric Breakdown Strength, IEC 60243-1, kV/mm	20.6

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 Safety Data Sheet (SDS).

Directions for use:

1. Product should be brought to room temperature before use.
2. For best performance bond surfaces should be clean and free from grease.
3. Excess material can be easily wiped away with non-polar solvents.
4. Actual cure schedule depends on mass and geometry of parts.

Loctite Material Specification[LMS]

LMS dated January 24, 2002. 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: 2 °C to 8 °C. Storage below 2 °C or greater than 8 °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
(°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

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