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LOCTITE

Technical Data Sheet

LOCTITE SI 5210™

Known as LOCTITE 5210
November 2016

PRODUCT DESCRIPTION

LOCTITE SI 5210™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Alkoxy silicone
Appearance (uncured)	Translucent to opaque, slightly yellow to straw color paste[LMS]
Components	One component - requires no mixing
Viscosity	Thixotropic paste
Cure	Room temperature vulcanizing (RTV)
Application	Potting

LOCTITE SI 5210™ is an ultra fast curing, non-corrosive RTV silicone designed for potting, wire tacking, selective sealing, vibration dampening and repair/rework applications on PCBs. It is ideally suited for high-volume manufacturing and is particularly effective for automotive electronics applications or other harsh environments. The fast surface cure allows the material to be handled quickly after dispensing. The thixotropic nature of LOCTITE SI 5210™ reduces the migration of liquid product after application to the substrate.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.05
Flash Point - See SDS	
Extrusion Rate, g/min:	
Pressure 0.62 MPa, temperature 25 °C:	
1/8" Nozzle	100 to 700[LMS]

TYPICAL CURING PERFORMANCE

Tack Free Time

Tack Free Time, minutes:	
Cured @ 22 °C / 50% RH	≤5[LMS]

Depth of Cure (light)

Depth, Cure for 4 hours , mm	2.0
Depth, Cure for 16 hours , mm	3.4

TYPICAL PROPERTIES OF CURED MATERIAL

After 1 week @ 22 °C / 50% RH

Physical Properties:

Shore Hardness, ISO 868, Durometer A		48
Water Vapor Transmission Rate, g/(h·m²)		5.2
Water Absorption, after 24 hours @ RT, %		0.87
Glass Transition Temperature, °C		-52
Coefficient of Thermal Expansion, , K^{-1}		255
Elongation, %		230
Tensile Strength	N/mm² (psi)	2.8 (410)
Tear Strength, ISO 34-1	N/mm (lb./in.)	9.5 (54)

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1, kV/mm	20.1
Dielectric Constant / Dissipation Factor, IEC 60250: @ 1 MHz	2.85/0.002
Volume Resistivity, IEC 60093,	8.2×10^{14}

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 1 week @ 22 °C / 50% RH

Lap Shear Strength, ISO 4587:

Aluminum	N/mm² (psi)	1.3 (190)

TYPICAL ENVIRONMENTAL RESISTANCE

Silicones provide excellent environmental resistance due to their unique chemical structure and the inherent properties of the materials.

GENERAL INFORMATION

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

Directions for use:

1. For best performance bond surfaces should be clean and free from grease.
2. Dispense LOCTITE SI 5210™ on the parts to pot or seal.
3. Assemble immediately.
4. Allow to cure at room temperature with ambient humidity.
5. Excess material can be easily wiped away with non-polar solvents.

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Loctite Material Specification[LMS]
LMS dated August 17, 2005. 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
(°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:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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