

LOCTITE® SI 5643™

October 2023

Product description

LOCTITE® SI 5643™ provides the following product characteristics:

Technology	Silicone
Chemical type	2K addition cure
Appearance (cured)	yellow
Appearance - Part A	yellow
Appearance - Part B	white
Mixing ratio	1:1 by volume 1:1 by weight
Cure	80°C x 30 min / 25°C x 24 h
Application	Electronic assemblies

LOCTITE® SI 5643™ is a two part, fast cure, low viscosity, self-leveling silicone for thermal potting applications. It features high thermal conductivity, excellent electrical insulation properties, a convenient mix ratio and can be cured over a wide range of temperatures.

Typical properties of uncured material

Part A Properties

Specific Gravity, ASTM D792 @ 25°C, g/cc	2.5
Viscosity @ 25 °C, mPa·s (cP) @ 1 s ⁻¹	5000

Part B Properties

Specific Gravity, ASTM D792 @ 25°C, g/cc	2.5
Viscosity @ 25 °C, mPa·s (cP) @ 1 s ⁻¹	5000

Mixed Properties

Specific Gravity, ASTM D792 @ 25°C, g/cc	2.5
Viscosity @ 25 °C, mPa·s (cP) @ 1 s ⁻¹	5500
Pot life @ 25°C, minutes	>20

Typical properties of cured material

Physical Properties

Hardness, Shore 00, ASTM D2240	55 to 65
Elongation, ASTM D412, %	70
Tensile Strength, ASTM D412, MPa	0.3
CTE, ASTM E831, ppm/K	220

Thermal properties

Thermal conductivity, ISO22007-2, W/(m·K)	1.4
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Electrical properties

Dielectric constant, ASTM D150, 25°C, @ 1000 Hz	5
Dielectric Strength, ASTM D149, kV/mm	>15
Volume resistivity, ASTM D257, Ω·cm	>1x10 ¹¹

General information

The cure of this silicone product may be inhibited through contact with certain contaminants. Avoid contact with butyl and chlorinated rubbers, amines, sulfur or sulfur containing materials, tin containing compounds, or heavy metal salts.

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

Direction for use

Some filler settling is common during shipping and storage. For this reason, the resins are stirred prior to use. Avoid air introduction during stirring. Continuous stirring and avoid air trap is recommended while in the tanks. Check the corner in drum of the settling to be stirred.

Storage

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

Optimal storage: at 5 to 25°C.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel 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 Henkel 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

Additional information

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