

# LOCTITE® SI 5631™

October 2023

## Product description

LOCTITE® SI 5631™ has the following product characteristics:

|                                        |                       |
|----------------------------------------|-----------------------|
| <b>Technology</b>                      | Silicone              |
| Chemical type                          | 2K addition cure      |
| Appearance (cured)                     | Pink                  |
| Appearance - Part A                    | Red                   |
| Appearance - Part B                    | White                 |
| Mix ratio, by volume (Component A : B) | 1:1                   |
| Mix ratio, by weight (Component A : B) | 1:0.93                |
| <b>Cure</b>                            | 80°C x 30 min         |
| <b>Application</b>                     | Electronic assemblies |

LOCTITE® SI 5631™ 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           | 1.69  |
| Viscosity @ 25 °C, mPa·s (cP) @ 10 s <sup>-1</sup> | 5,500 |

### Part B Properties

|                                                    |       |
|----------------------------------------------------|-------|
| Specific Gravity, ASTM D792 @ 25°C, g/cc           | 1.57  |
| Viscosity @ 25 °C, mPa·s (cP) @ 10 s <sup>-1</sup> | 4,500 |

### Mixed Properties

|                                                    |       |
|----------------------------------------------------|-------|
| Specific Gravity, ASTM D792 @ 25°C, g/cc           | 1.63  |
| Viscosity @ 25 °C, mPa·s (cP) @ 10 s <sup>-1</sup> | 5,000 |
| Working life @ 25°C, minutes                       | >60   |

## Typical properties of cured material

### Physical properties

|                                  |      |
|----------------------------------|------|
| Hardness, Shore A, ASTM D2240    | 28   |
| Elongation, ASTM D412, %         | >150 |
| Tensile Strength, ASTM D412, MPa | >1.0 |
| CTE, ASTM E831, ppm/K            | 239  |
| Flammability, UL 94              | V0   |

### Thermal properties

|                                           |     |
|-------------------------------------------|-----|
| Thermal conductivity, ISO22007-2, W/(m·K) | 1.0 |
|-------------------------------------------|-----|

## Electrical properties

|                                               |                    |
|-----------------------------------------------|--------------------|
| Dielectric constant, ASTM D150, °C, @ 1000 Hz | 4                  |
| Dielectric Strength, ASTM D149, kV/mm         | >20                |
| Volume resistivity, ASTM D257, Ω·cm           | 1x10 <sup>13</sup> |

## 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/mm<sup>2</sup> 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

### Disclaimer

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