

LOCTITE® SI 5773™

Known as LOCTITE® 5773™
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PRODUCT DESCRIPTION

LOCTITE® SI 5773™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Alkoxy silicone
Appearance (uncured)	Transparent, colorless to slightly yellow haze ^{LMS}
Components	One component - requires no mixing
Cure	Ultraviolet (UV)/ moisture
Application	Potting or Sealing

LOCTITE® SI 5773™, a deep UV curing silicone, is UV/moisture dual cured and cures to a depth of cure of >25mm. It is designed typically as a potting sealant for components in automotive electronic applications (eg. sensor, connector, power module). When cured, it provides good gross leak resistance, good electrical insulation, good water & moisture resistance and good vibration & noise suppression.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C 1.0

Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):

Spindle 3, speed 10 rpm, 3,000 to 7,500^{LMS}

TYPICAL CURING PERFORMANCE

Surface Cure

When curing with sufficient UV light irradiance, exposed material cures dry to the touch in seconds. Atmospheric moisture cures material not exposed to UV light.

Tack Free Time, seconds:

75 mW/cm², measured @ 365 nm, ≤65^{LMS}

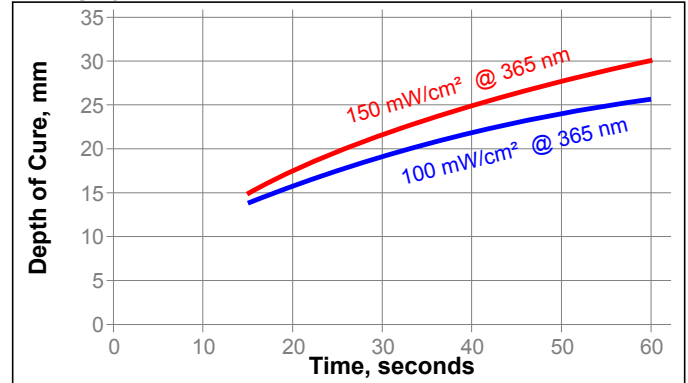
Skin Over Time, minutes:

Moisture cure only ≤360^{LMS}

Depth of Cure

The graph below shows the increase in depth of cure with time at 100 mW/cm² - 150 mW/cm².

Curing System: Metal Halide-UV Bulb



TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 70 mW/cm², measured @ 365 nm, for 60 seconds per side, followed by 1 week @ 23±2 °C / 50±5% RH

Physical Properties:

Shore Hardness, ISO 868, Durometer A	25 to 50 ^{LMS}
Elongation, ISO 527-3, %	≥50 ^{LMS}
Tear Strength, ISO 34-1, Die C	N/mm² ≥1.0 ^{LMS} (psi) (≥145)
Tensile Strength, ISO 527-3	N/mm² ≥0.5 ^{LMS} (psi) (≥72.5)

Cured @ 150 mW/cm², measured @ 365 nm, for 15 seconds per side, followed by 1 week @ 23±2 °C / 50±5% RH

Physical Properties:

Glass Transition Temperature, ASTM E 1640, °C:	
(Tg) via DMS	-89.9

Electrical Properties:

Dielectric Breakdown Strength, IEC 60243-1, kV/mm	13.8
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Cured @ 150 mW/cm², measured @ 365 nm, for 30 seconds per side, followed by 1 week @ 40±2 °C / 50±5% RH

Physical Properties:

Coefficient of Thermal Expansion, ISO 11359-2, K⁻¹:	
Temperature Range: 30 °C to 150 °C	3.3×10⁻⁴

Cured @ 180 mW/cm², measured @ 365 nm, for 30 seconds

Physical Properties:

UV Depth of Cure, mm	≥14 ^{LMS}
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TYPICAL PERFORMANCE OF CURED MATERIAL**Adhesive Properties**

Cured @ 180 mW/cm², measured @ 365 nm, for 30 seconds followed by 1 week @ 23±2 °C / 50±5% RH

Lap Shear Strength, ISO 4587:

Polybutylene Terephthalate (PBT) 420 to Glass:

0.25 mm gap	N/mm ²	≥0.1 ^{LMS}
	(psi)	(≥14.5)

GENERAL INFORMATION

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

Directions for use:

1. This product is UV light sensitive; exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling.
2. This product is also moisture cured. Exposure to environmental moisture should be kept to a minimum during storage and handling.
3. For best performance bond surfaces should be clean and free from grease.
4. Remove product from refrigeration and allow to reach ambient temperature before use.
5. First cure with UV light, then allow the material to cure with moisture (allow postcuring).
6. Excess material can be easily wiped away with non-polar solvents.

Loctite Material Specification^{LMS}

LMS dated September 2, 2003. 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

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

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Reference 1.1