Technical Data Sheet

LOCTITE® SI 5950™

Known as LOCTITE® 5950™
September 2015

PRODUCT DESCRIPTION

LOCTITE® SI 5950™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Acetoxy silicone
Appearance (uncured)	Black paste[LMS]
Components	One component - requires no mixing
Thixotropic	Reduced migration of liquid product after application to substrate
Cure	Ultraviolet (UV) light
Secondary Cure	Moisture for shadowed areas
Application	Gasketing

LOCTITE® SI 5950™ is designed for use as a cure-in-place gasket material.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 20 °C	1.1
Flash Point - See SDS	
Flow, ISO 7390, mm:	
After 2 @ 25 °C	89
Extrusion Rate, g/min:	
Pressure 0.62 MPa, time 15 seconds, temperature 25 °C:	
Semco Cartridge	250 to 425[LMS]

TYPICAL CURING PERFORMANCE

Normal processing conditions will include exposure to sufficient UV light irradiance to effectively cure the material. Surface and/or atmospheric moisture will promote the cure of material in shadowed regions. Although functional strength is developed almost instantly due to the UV curing nature of LOCTITE® SI 5950™, increased cure properties are developed during 72 hours at ambient conditions.

Surface Cure

When curing with sufficient UV light irradiance, exposed material will cure dry to the touch in seconds. Atmospheric moisture cures material not exposed to UV light. Typically, non-UV light cured areas will skin over in approximately 11 minutes and become tack free in 14 minutes.

TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 40 mW/cm² , for 60 seconds per side plus 7 days @ 22 °C / 50% RH

Physical Properties:

Water Absorption, ISO 62, %:		
24 hours in water @ 22 °C		0
Shrinkage, %		1.5
Tear Strength, ISO 34-1 , Die B	N/mm	2.3
	(lb./in.)	(13.1)

Compression Set, ASTM D 395, Method B, %:

After 22 Hours Clamp Time @ 25°C:	
24 hours cure after UV exposure	23.33
72 hours cure after UV exposure	14.56
168 hours cure after UV exposure	10.67
After 22 Hours Clamp Time @ 25°C:	
14 days RT cure after UV exposure:	
@ 25 °C	6.44
@ 70 °C	12.75
@ 121 °C	23.33

Cured @ 70 mW/cm² , measured @ 365 nm, for 60 seconds per side plus 3 days @ 22 °C / 50±5% RH

Physical Properties:

Shore Hardness, ISO 868, Durometer A		20 to 33[LMS]
Elongation, ISO 37, %		≥180[LMS]
Tensile Strength, ISO 37	N/mm²	≥1[LMS]
	(psi)	(≥145)

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. For best performance bond surfaces should be clean and free from grease.
2. UV cure rate is dependent on lamp intensity, distance from light source, depth of cure needed or bondline gap and light transmission of the substrate through which the radiation must pass. If filters are in place to block light and heat then this should be considered in the determination of cure times.
3. Functional strength is achieved almost instantly.
4. Full performance properties will develop over 72 hours.
5. Moisture curing begins immediately after the product is exposed to the atmosphere, therefore parts to be assembled should be mated within a few minutes after the product is dispensed.
6. Excess material can be easily wiped away with non-polar solvents.

Loctite Material Specification[LMS]

LMS dated January 30, 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: 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

Reference 1.1