Technical Data Sheet

LOCTITE® SI 5710™

February 2019

PRODUCT DESCRIPTION

LOCTITE® SI 5710™ provides the following product characteristics:

Technology	Silicone
Chemical Type	Polyaddition Silicone
Appearance,Resin (Component A)	Clear liquid
Appearance, Hardener (Component B)	Clear liquid
Appearance (Mixture)	Clear liquid
Components	Two components - requires mixing
Mix Ratio by volume: Part A: Part B	1 : 1
Viscosity	Low
Cure	Room temperature cure
Application	Potting

LOCTITE® SI 5710™ is an ultra clear, two-part silicone which cures at room temperature and can be accelerated by heat. Thanks to polyaddition technology, the product releases no by-products, has low shrinkage, is non-corrosive and health and safety friendly. LOCTITE® SI 5710™ provides high transparency with a high transmission rate and is used for potting applications in the Lighting, Electrical and Optical industries for LED channel or lenses, optical sensors or coating processes.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A:

Density, g/cm³	1.0
Specific Gravity @ 25 °C	1.0 g/cc
Viscosity, STM 738, 25 °C, mPa·s (cP): Shear rate 20 s^{-1}	2,000
Flash Point - See SDS	

Part B:

Density, g/cm³	1.0
Specific Gravity @ 25 °C	1.0 g/cc
Viscosity, STM 738, 25 °C, mPa·s (cP): Shear rate 20 s^{-1}	1,400
Flash Point - See SDS	

Mixed:

Density, g/cm³	1.0

TYPICAL CURING PERFORMANCE

Gel Time @ 25 °C, minutes	45
Tack Free Time , minutes	135
Volatility, %	0.26

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 28 days @ 22 °C / 50% RH

Physical Properties:

Shore Hardness, ISO 868, Durometer A		31
Water Absorption, %		0.48
Coefficient of Thermal Expansion, , K^{-1}		380×10^{-6}
Elongation, at break, ISO 527-3, %		130
Tensile Strength, ISO 527-3	N/mm² (psi)	2.3 (334)
Tensile Modulus, ISO 37	N/mm² (psi)	0.8 (116)

Electrical Properties:

Surface Resistivity, IEC 60093, ohms	56×10^{15}
Volume Resistivity, IEC 60093, ohm-cm	113×10^{12}

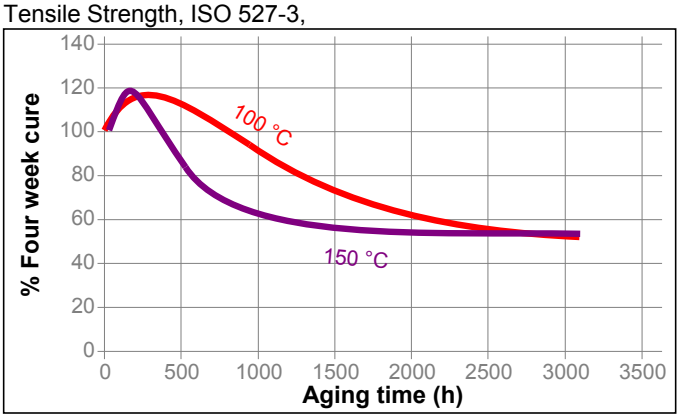
Optical Properties:

Refractive Index	1.4

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 28 days @ 22 °C

Tensile Strength, ISO 527-3,



Chemical/Solvent Resistance
Tensile Strength, ISO 527-3,

		% of initial strength			
Environment	**°C**	**100 h**	**500 h**	**1000 h**	**3000 h**
2% Ammonia/Water	22	25	45	65	55
Isopropanol	22	25	30	45	35
Water	22	25	40	60	45
Water	60	30	45	65	50
Water	90	35	50	70	50
Water/glycol 50/50	100	60	40	60	55
Water/glycol 50/50	120	25	35	50	55
Synthetic oil	150	25	25	35	

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 the mating surface should be clean and free of grease.
2. Special surface treatments can increase the bond strength and durability.
3. Best results are achieved utilizing a helix 8mm diameter, 24 element mix nozzle.
4. **Dual Cartridges:** Insert the cartridge into the application gun and start the plunger into the cylinders using light pressure on the trigger. Next, remove the cartridge cap and expel a small amount of adhesive to be sure both sides are flowing evenly and freely. Attach the static mixing nozzle to the end of the cartridge and begin dispensing the adhesive. Purge and dispose of the first 3 - 5 cm from the end of the mix nozzle, as it may not be sufficiently mixed.
   Bulk Containers: Utilize volumetric dispense system to ensure proper mix ratio and utilize mix nozzle to obtain adequate mixing.
5. Excess uncured adhesive can be wiped away with organic solvent (e.g. Acetone).
6. Certain materials can inhibit the curing of LOCTITE® SI 5710™, such as organotin compounds, sulfur-containing materials and amine-containing materials.

Not for product specifications
The technical data contained herein are intended as reference only and are not considered specifications for the product.
Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

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

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Reference 1