

CSL-588 Technical Data Sheet

Electronic Grade Silicone Sealant/Adhesive

1. PRODUCT NAME

CSL-588 Electronic Grade Silicone Sealant/ Adhesive

2. FEATURES

- Neutral cure formulation
- Recognized under the Components Program of the Underwriters Laboratories Inc.®
- Meets MIL-A-46146A, Type 1 specifications
- Non-corrosive to metals in electronic/ electrical applications

3. PRODUCT DESCRIPTION

CSL-588 is a one-part moisture cure, neutral RTV (room temperature vulcanizing) silicone/ adhesive which cures to form a tough, permanently flexible rubber. The non-corrosive curing systems makes it ideally suited for protecting, sealing and insulating corrosion sensitive electrical and electronic materials such as copper, brass and silver.

CSL-588 has excellent dielectric properties, high surface resistivity and repels water to protect sensitive electronic components.

Typical Properties

These values are not intended for use in preparing specifications

Uncured	
Type	100% silicone, one-part RTV
Appearance	Smooth, non-slump paste
Specific Gravity	1.03
Slump/Sag	Nil
Extrusion Rate (3.2mm (1/8") orifice, 90psi)	100 g/min.
Application Temperature Range	-18°C to 50°C (0°F to 120°F)
Cure System	Neutral, Moisture Cure
Skin-Over Time at Standard Conditions*	10 min.
Cure Time at Standard Conditions*	24 hr.
Cured	
	At Standard Conditions* for 7 Days
Durometer Hardness (ASTM D2240, Shore A)	25 points
Tensile Strength (ASTM D412)	14.0 kg/cm ² (200 psi)
Elongation at Break (ASTM D412)	400%
Tear Resistance (ASTM D624, Die B)	3.5 kN/m (20 ppi)
Thermal Expansion Coefficient (0°C to 100°C / 32°F to 212°F)	9.3 x 10 ⁻⁴ cm/°C
Useable Temperature Range	-62°C to 232°C (-80°F to 450°F)
Dielectric Strength (ASTM D149)	550 V/mil (217kV/cm)
Volume Resistivity (ASTM D257)	1.5 x 10 ¹⁵ ohm·cm
Dissipation Factor, 100 Hz to 100 kHz (ASTM D150)	0.0015
Dielectric Constant, 100 Hz to 100 kHz (ASTM D150)	2.80

*Standard Conditions are 25°C (77°F) and 50% relative humidity

CSL-588 has excellent resistance to weathering including ozone, ultraviolet radiation and airborne chemicals. After cure, the heat stability range is from -62°C to 232°C (-80°F to 450°F) and the sealant/adhesive can be applied to surfaces from -18°C to 50°C (0°F to 120°F).

CSL-588 can be used as a durable, general purpose sealant/adhesive in a wide range of electrical and electronic applications. Priming is not normally required for application to most substrates.

Such applications include:

- Lead wire entries
- Conduit terminal boxes and connectors
- Component mounting
- Conduit ends
- Splices
- Cover plates
- Coaxial cable connectors
- Printed circuit boards
- Conductor entry holes

4. INSTALLATION

CSL-588 is ready to use and requires no mixing or additives. Curing begins as soon as the sealant is exposed to air. At conditions of 25°C (77°F) and 50% relative humidity, a bead of sealant 3 mm (1/8") will skin over in 10 minutes and fully cure in 24 hours, attaining full physical properties in 7 days. Higher humidity accelerates cure. Cure time will also vary with the degree of confinement. Tooling, if necessary, should be done before skin-over takes place.

CSL-588 has excellent unprimed adhesion to most substrates. If there is any doubt about contamination, surfaces should be solvent wiped with oil-free solvents such as naphtha.

5. COLORS

CSL-588 is supplied in clear and white. Other colors are available upon request.

6. PACKAGING

CSL-588 is available in 300 ml (10.2 fl. oz.) caulking cartridges, 19L (5 US gallon) pails and 189L (50 US gallon) drums.

7. STORAGE

CSL-588 when stored in original unopened container at or below 32°C (90°F) has a one year shelf life from the date of manufacture. Most products however, will last longer if stored in cool dry conditions.

8. SAFETY PRECAUTIONS

CSL-588 uses a neutral cure system, so no acetic acid or objectionable by-products are

evolved during cure. Adequate ventilation should be provided with extensive use of this sealant. On direct contact, uncured sealant may irritate eyes. Flush well with water and call a physician. Avoid prolonged contact with skin. See Material Safety Data Sheet available on this product. **KEEP OUT OF REACH OF CHILDREN.**

9. UL® CLASSIFICATION

CSL-588 is recognized under the Components Program of the Underwriters Laboratories Inc.®

10. MILITARY SPECIFICATIONS

CSL-588 meets MIL-A-46146A, Type 1 specifications

11. WARRANTY

CSL Silicones Inc. warrants that its products will meet its specifications. CSL shall in no event be liable for incidental or consequential damages. Except as expressly stipulated, CSL's liability, expressed or implied, is limited to the stated selling price of any defective goods.

Data is subject to change without notice and it is therefore recommended that this information not be used for specification writing. For additional information on specific applications, contact the manufacturer.

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Printed in Canada

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