Product Datasheet

SP&S Specialty Polymers and Services

Silflex™ 345

One Component, Clear, Non-Slumping/Non-Sagging Silicone Adhesive

Product Description
Silflex 345 is a one component silicone adhesive that cures at room temperature when exposed to atmospheric moisture. This adhesive is a thixotropic paste with excellent adhesion to most surfaces without the need for primers. When fully cured it provides a tough, rubbery bond that demonstrates excellent chemical and environmental resistance as well as electrically insulating properties. Silflex 345 meets Mil-A-46106A, type I and conforms to FDA requirements for use on incidental food contact surfaces.

Key Features
- Meets Mil-I-46106A, Type I
- Resistant to extended exposure to 450F (232C) and intermittent exposure to 500F (260C)
- Remains flexible to at least -75F (-60C)
- RoHS and REACH Compliant

Main Applications
- Sealing openings in modules and housings
- Adding mechanical stability & vibration resistance to individual components
- Assembly of components on PWB
- Sealing in and around wired and electrical leads
- Yoke assembly

Typical Properties

UNCURED PROPERTIES	
Appearance	Clear
Viscosity	Thixotropic Paste
Specific Gravity	1.10
Work-life at 23°C	60 - 90 minutes
Time to achieve 90% of final Strength:	24 – 48 hours at room temperature and with an ambient humidity of 30% - 80%
Full Cure:	3 – 7 days at room temperature and with an ambient humidity of 30% - 80%. Sections thicker than ¼" may take longer to cure.
Alternate Cure:	4-8 hours at 60C in an oven with moisture vapor lines or a dish of water to provide humidity.

CURED PROPERTIES:	
Tensile Strength	300 psi
Tensile Elongation	400%
Shore A Hardness	25A
Dielectric Strength	530 Volts/mil
Dielectric Constant	2.8 kHz

Dissipation Factor	0.0015
Volume Resistivity	1 x 10^{15} ohm-cm
Temperature Range of Use, continuous	-60°C to + 232°C (-75°F to +450°F)

Note: Not for Product Specification Purposes – these are typical values and based on 7 days curing with approximately 50% relative humidity. Please contact SP&S for assistance in writing purchasing specifications.

Curing Characteristics

Under normal room temperature conditions (23°C - 27°C) and humidity (30% - 80% relative humidity), the Silflex 345 will develop a skin in about 60 – 90 minutes and cure to approximately 90% of its final strength in 24 – 48 hours. Full strength will develop in 3 – 7 days. Because this adhesive cures with exposure to moisture and under ambient temperature conditions, a change in curing speed may be seen if the temperature or humidity changes.

Application:

Silflex 345 is typically applied directly from its original tube, syringe, or cartridge. Once dispensed it may be spread using a spatula or other tools to achieve the desired bond line or seal. For most surfaces, including most metal, plastics, glass, and rubbers, priming will not be necessary. However, if insufficient bond strength is observed or curing inhibition is witnessed a primer such as our Primax SF may be useful to prime and seal the surface prior to application of the Silflex 345.

Please note that the Silflex 345 is generally not suitable for bonding calcareous surfaces (i.e. those containing calcium carbonate, chalk, or limestone) primers may be possible for some surfaces, but will require evaluation to determine suitability for each surface and application. The Silflex 345, and many other adhesives, will also find it difficult to bond to surfaces that bleed oils, plasticizers, or solvents as these can prevent adhesion to the surfaces. Finally, please note that the cured Silflex 345 is generally not paintable and is not intended as an adhesive for the structural bonding of mirrors.

Shelf-life and Storage

Silflex 345 should be stored in their original, sealed containers in an environment that does not exceed 38°C (100°F). Under these conditions the expected shelf-life of the material is a minimum of 6 months from Date of Shipment. Storage at 4°C – 8°C, in the tightly closed original containers, may prolong the shelf-life to 12 months or longer.

FIRST AID

In case of contact:
Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.
Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.
Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.
Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

Specialty Polymers & Services, Inc. (SP&S)
27822 Fremont Court
Valencia, CA 91355
www.spolymers.com
Tel: 661-294-1790
Fax : 661-294-0640
info@spolymers.com