

# Silopren\* UV Gel 100

## Two Part UV Curing Silicone Gel

### Product Description

**Silopren UV Gel 100** is a two-part low viscosity liquid silicone, when activated with UV radiation, cures within a short period of time to a soft, translucent, dimensional stable gel. Due to its excellent dielectric properties the material is the right solution for potting electrical and electronic parts. Silopren UV Gel 100 protects sensitive electronic parts against humidity, dirt, shock and vibration.

### Key Performance Properties

- Low viscosity, good pourable
- Fast cure at RT when activated with UV radiation
- Primerless adhesion to many substrates
- Absorbs shock and protects delicate mechanical components from vibration
- Outstanding stress relief properties
- Excellent dielectric properties

### Applications

Silopren UV Gel 100 is designed to preserve dielectric integrity and provide outstanding protection for delicate electronic and circuit assemblies operating in harsh environments, such as hybrids in automotive or aerospace, especially these using surface mounted devices which need to be protected from moisture, dust, chemicals, external vibration and mechanical shock as well as thermally induced stresses.

### Typical Product Data

Typical uncured Properties		
	(A)	(B)
Appearance	Clear	Clear
Viscosity (20°C) mPa s	1000	1000
<b>After mixing (no light present)</b>		
Mix ratio by weight	10: 1	
Pot life day 1)	>3	
Density (20°C), g/cm <sup>3</sup>	0.98	
<b>Cured Properties (30 minutes after radiation with 1200mJ/cm<sup>2</sup> UVA and UVB light) 2)</b>		
Appearance	Clear	
Penetration, 0.1 mm Hollow cone 62.5 g; reading 5 sec	120	
Volume resistivity, ohm.cm	3x10 <sup>14</sup>	

Dielectric strength kV/mm	34
Dielectric constant (50 Hz)	2.9
Dielectric loss factor (50 Hz)	0.0006

- 1) Pot life is doubling of the initial mixed viscosity
- 2) UV lamp type UVAPRINT 100-200 HVP, Mercury/Ga, 100W/cm from the company Hoenle, Germany

### Specifications

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials Technical Service RTV1 and 2.

### Instructions for use

#### Compatibility

Silopren UV Gel 100 silicone gel will cure in contact with most clean dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulfur containing materials, amines and certain metal soap-cured RTV silicone rubber compounds, can cause inhibition. Cure inhibition is characterized by a lack of cure at the interface of the silicone rubber and the substrate.

It is recommended that a sample patch test be performed with Silopren UV Gel 100 to determine if a barrier coating or other inhibitions preventing measures are necessary before pouring the Silopren UV Gel 100.

#### Deaeration

Air entrapped during mixing should be removed to eliminate voids in the cured product. The mixed material should be exposed to a vacuum of 20 mbar. The material will expand, crest and recede to about the original level as the bubbles break. Degassing is usually completed about 2 minutes after frothing ceases.

#### Curing

When radiated with 1200 mJ/cm<sup>2</sup> UVA and UVB light 2) the gel is fully cured in about 60 minutes at RT. When radiated with UV light for longer periods of time, causing a temperature increase, the cured gel can show a yellow discolouration.

#### Bonding

To achieve optimum adhesion of the Silopren UV Gel 100, substrates should be cleaned with a non-oily solvent such as a naphtha, methyl ethyl ketone (MEK) or isopropyl alcohol.

### Handling and Safety

Material Safety Datasheets are available upon requests from Momentive Performance Materials. Similar information for solvents and other chemicals used with the Momentive Performance Materials products should be obtained from your supplier. When solvents are used, proper safety precautions must be observed.

### Storage and Warranty Period

The shelf life will be indicated by the 'use before date' on the associated documents with a minimum of 4 months when stored in the original unopened containers at a temperature below 27C.

### Availability

Silopren UV Gel 100 part A is available in 20 kg pails.  
Silopren UV Gel 100 part B is available in a aluminum/PE laminate bag with a content of 2 kg

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