SILICONE GEL No.1

1. DESCRIPTION

Silicone Gel No.1 is one of a family of soft, adherent, clear silicone elastomeric gels designed for the encapsulation and protection of electronics components.

It is a low viscosity, 2-component system that is readily mixed in a 1:1 ratio.

Silicone Gel No.1 is the softest gel in this group of products.

It is used to provide protection from vibration, thermal or mechanical shock. Silicone Gel No.1 has excellent dielectric properties and also gives excellent protection from water and many environmental contaminants.

2. ADVANTAGES

- Low viscosity
- Soft but resilient
- Simple 1:1 ratio mix
- Excellent pot life and curing characteristics
- Excellent adhesion to many substrates
- Flexible down to -55°C
- Suitable up to +200°C

3. CHARACTERISTICS

a) CONSTITUENTS:

(Applies to both parts A and B)

	Uncured Product
Appearance	Liquid
Colour	Clear
Specific Gravity / gcm^{-3} @25 °C	0.97
Viscosity / cps	1000
Mix Ratio	1:1
Pot Life, minutes	~45

b) MIXING:

Each of the Silicone Gel No.1 component parts should be mixed in the recommended one-to-one ratio (by volume or weight).

This can be done readily either by hand or using a powered mixer, avoiding excessive aeration.

The curing process begins as soon as the components are mixed and the working or pot life of the mixed system is dependent on the ambient temperature conditions.

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Note: Chilling the separate component parts, before and after mixing, will extend the pot life, but not immediately.

4. USE AND CURE INFORMATION

Silicone Gel No.1 is supplied in several pack sizes and consists of kits containing equal quantities of Parts 'A' and 'B'.

Containers should always be kept sealed when not in use, and all mixing equipment must be clean and free from contaminants such as organo-tin, sulphur, nitrogen compounds which can poison the catalyst and prevent proper cure.

a) CURE PROPERTIES

Temperature (°C)	Cure Time (h)
150	0.5
100	1.0
25	20

b) CURE GEL

Penetration (mm) [19.5g Cone]	3 to 7
Volatiles, %	0.1 max

3) ELECTRICAL PROPERTIES

Dielectric Strength, kV/mm	>18
Volume Resistivity, Wcm	2.1×10^{15}

4) ADHESION

Fully cured Silicone Gel No.1 exhibits good adhesion to most substrates such as: Aluminium, stainless steel, ABS, polycarbonate, PCB boards, Nylon 6,6.

5. PACKING

Silicone Gel No.1 is supplied in kits containing equal quantities of Parts A and B.

6. HEALTH & SAFETY

(Refer to Health & Safety Data Sheet)

Silicone Gel No.1 should be stored in its original unopened containers at temperatures below 30°C. Under these conditions each part will remain useful for a period of 12 monthss.

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7. SHELF LIFE

Silicone Gel No.1 should be stored in its original unopened containers at temperatures below 30°C. Under these conditions each part will remain useful for a period of 12 months.