



# Technical Data Sheet

## SC2001 Silicone Resin

### Product Description

SC2001 is a two-part, general purpose potting and encapsulating compound designed for the protection for electronic devices. It has exceptional high temperature properties, suitable for use in applications where the operating temperature will be up to 200°C.

### Features

- 1:1 ratio
- Wide temperature range
- Excellent flexibility
- Flame retardant
- Thick section cure
- Excellent chemical and water resistance

<b>Approvals:</b>	RoHS Compliant	Yes
	UL Approval	No

### **Typical Properties:**

Liquid Properties:	Base material	Silicone
	Appearance Part A	Black liquid
	Appearance Part B	White liquid
	Density Part A (g/ml)	1.4
	Density Part B (g/ml)	1.4
	Viscosity Part A (mPa s 23°C)	4000
	Viscosity Part B (mPa s 23°C)	3000
	Viscosity (Mixed System) (mPa s 23°C)	3500
	Mix Ratio (Weight)	1:1
	Mix Ratio (Volume)	1:1
	Usable Life (20°C)	30 minutes
	Cure Time (23°C)	24 hours
	Cure Time (70°C)	25 minutes
	Cure Time (100°C)	10 minutes
	Storage Conditions	Above 15°C, Below 30°C
	Shelf Life	24 months

Cured System:	Colour (Mixed System)	Dark grey
	Cured Density (g/ml)	1.4
	Temperature Range (°C)	-50 to 200
	Max Short Term Temperature Range (°C) (Application and geometry dependant)	+225
	Shore Hardness	A50
	Thermal Conductivity (W/m•K)	0.6
	Flame retardancy	Yes, meets UL94 V-0
	Dielectric Strength KV/mm	20
	Dielectric Constant @ 100 Hz	3.1
	Dissipation Factor @ 100 Hz	0.0027
	Permittivity (50 kHz)	3
	Loss Tangent (50 kHz)	0.0016

## **Mixing Procedures**

### **Bulk Mixing**

When mixing, care must be taken to avoid the introduction of excessive amounts of air. Automatic mixing equipment is available which will not only mix both the resin and hardener accurately in the correct ratio but do this without introducing air. Containers of Part A (Resin) and Part B (Hardener) should be kept sealed at all times when not in use to prevent the ingress of moisture. Bulk material must be thoroughly mixed before use. Incomplete mixing will result in erratic or partial curing.

### **General**

Sedimentation of the resin may occur due to the low viscosity. This must be dispersed before removing any material from the container by stirring with a broad bladed spatula or gently rolling the can. Take care not to introduce excessive amounts of air during this operation or it may be necessary to re-evacuate the resin. Sedimentation will be accelerated by storage at high temperatures.

## **Additional Information**

All surfaces must be clean before resin is applied. Certain materials, chemicals, curing agents and plasticizers can inhibit the cure of silicone encapsulants. Most notable of these include:

- Organotin and other organometallic compounds
- Silicone rubber containing organotin catalyst
- Sulphur, polysulphides, polysulphones or other sulphur containing materials
- Amines, urethanes or amine-containing materials
- Unsaturated hydrocarbon plasticisers
- Some solder flux residues

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