

## Electrolube® SC4003

Silicone Resin

Asia Only

### DESCRIPTION

**Electrolube® SC4003** is a two-part low-odor RTV-2 silicone potting and encapsulating resin that cures upon exposure to atmospheric moisture. It has excellent high thermal conductivity, Can aid Quick heat dissipation thereby extending electronic product life

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

### FEATURES AND BENEFITS

- Good flow characteristics to allow the potting of difficult and complex geometries
- No additional priming step is required for good adhesion to poorly prepared surfaces
- Simple 1:1 mix ratio, for ease of processing
- Excellent flexibility, tough, Impact & Thermal shock resistance; adhesion to a wide range of substrates
- Due to its low stress during and after cure, this material will not crush or damage delicate components and Vibration resistant

### PRODUCT INFORMATION

Please contact your customer service representative for information on available package sizes.

### APPROVALS

Standard	Status
RoHS-2 Compliant (2015/863/EU)	Yes

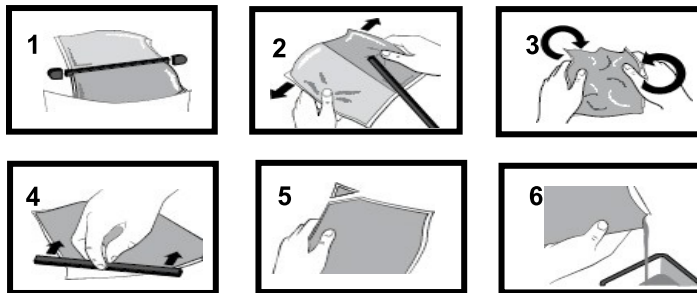
**PHYSICAL PROPERTIES**

Category	Results
<b>Liquid Properties</b>	
Base Material	Silicone
Color Part A - Resin Part B - Hardener	Black Off White
Density (g/mL) Part A - Resin Part B - Hardener	1.62 1.62
Viscosity (mPa s 23 °C) Part A Part B Mixed System	10,000 to 15,000 10,000 to 15,000 10,000 to 15,000
Mix Ratio Weight Volume	1:1 1:1
Usable Life (20 °C)	30 minutes
Gel Time (23 °C)	300 minutes
Cure Time (23 °C)	24 hours
Storage Conditions	Dry Conditions: Above 15 °C, Below 30 °C
Shelf Life	12 Months
<b>Cured System</b>	
Color (Mixed System)	Black
Cured Density (g/mL)	1.62
Temperature Range (°C)	-60 to 200
Max Temperature Range (Short Term (°C)/30 Mins) (Application and Geometry Dependent)	220
Volume Resistivity (ohm-cm)	10 <sup>13</sup>
Dielectric Strength (kV/mm)	20

Category	Results
Shore Hardness After 7 days	A50 A80
Tensile Strength (MPa)	5
Elongation at Break	80%
Thermal Conductivity (W/m.K)	1.0
Tear Strength (N/mm)	5
Flame Retardancy	Meet UL 95 V-0

### APPLICATION GUIDELINES – RESIN PACKS

When in Resin pack form, the resin and hardener are mixed by removing the clip and moving the contents around inside the pack until thoroughly mixed. To remove the clip, remove both end caps, grip each end of the pack and pull apart gently. By using the removed clip, take special care to push unmixed material from the corners of the pack. Mixing normally takes from two to four minutes depending on the skill of the operator and the size of the pack. Both the resin and hardener are evacuated prior to packing so the system is ready for use immediately after mixing. The corner may be cut from the pack so that it may be used as a simple dispenser.



### APPLICATION GUIDELINES - BULK

#### 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 has been minimised by careful attention to the formulation. However, any sediment which may have occurred over long periods of time must be dispersed before removing any material from the container. This dispersion can be carried out (if necessary) 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. Sedimentation found in resin packs forms no problem since the sediment is re-mixed when the pack is used.

SC4003 is a moisture curing system. Relative humidity of 50% or above is preferred for curing; the thickness of the layer will affect the rate of initial cure – the higher the thickness applied, the longer it will take to reach the required strength. Moisture cure systems use humidity during curing and cannot be accelerated using heat. The cure process will only take place if the material is open to the atmosphere and curing will be adversely affected if access to humidity is removed prior to the completion of the cure process.

**ADDITIONAL INFORMATION**

**Storage:** At least 12 months from the date of manufacture in the original sealed container at ambient temperature. Product can react with moisture in the air. This may result in increased viscosity & reduced usable life.

Revision 4 : November 2021

**SAFETY & WARNING**

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

**CONTACT INFORMATION**

[www.macdermidalpha.com](http://www.macdermidalpha.com)

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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