



Technical Data Sheet

SOA Electrolube No. 2 Oil

Product Description

The Electrolube 2 Range of contact lubricants were developed in response to a requirement for an effective treatment for all types of contacts, particularly in situations where extremes of temperature and environmental conditions are encountered. The range encompasses grease (SGA), oil (SOA), and solvent-diluted oil (SFA). Correct application of the right grade will reduce contact resistance and arcing of contacts of all ratings from small relays to high capacity contactors.

Electrolube have additional contact grease products with different properties for specific applications. These include improved plastics compatibility, wider temperature range etc. Please ask for further details.

Features

- Effective at low temperature (-40°C).
- Low evaporative loss (0.4% after 72 hours at 100°C).
- Contains no silicones.
- Excellent lubrication properties (spiral shaped molecules with effective length of 20 Angstrom units).
- Will loosen tarnish and corrosion and leave a protective film to prevent further contamination.
- High stable synthetic material, fully inhibited against copper corrosion, oxidation, etc.
- Improves contact performance by increasing the effective contact area and preventing arcing.

Approvals **RoHS Compliant (2002/95/EC):** **Yes**

Typical Properties:

Colour	Light Brown
Density (g/ml)	0.98
Temperature Range (°C)	-40 to +155
Evaporation Weight Loss (% 72 hours @ 100°C)	0.4
Copper Strip Corrosion (IP154 / ISO 2160)	≤1b
Silver Corrosion (DIN 51759, 3 hrs @100°C)	No Change
Plastic Compatibility - ABS	Test
Plastic Compatibility - PC	Test
Ash Content (%)	<0.02
Neutralisation Value (mgKOH/g)	0.38
Water Content (ppm)	32
Refractive Index (N/D 20)	1.46
UV Trace	No
Viscosity @ 100°C (Kinematic Viscosity (cSt))	10.4
Viscosity Index (ASTM D 2270:IP 226)	190
Pour Point (ASTM D 97 (°C))	-46
Flash Point (COC ASTM D 92 (°C))	242
Surface Tension (dynes/cm @ 20°C)	34.7

Electrical Properties:

Dielectric Constant (1 MHz)	5
Breakdown Voltage (BS148 (kV))	47
Loss Tangent (Tan delta 1MHz)	0.002

<u>Packing</u>	<u>Order Code</u>	<u>Shelf Life</u>
55 ml Bottle	SOA55B	48 Months
1 Kg Bulk	SOA01K	72 Months
5 Kg Bulk	SOA05K	72 Months
25 Kg Bulk	SOA25K	72 Months

NATO Stock No (SOA55B): 6850-99-220-1930 (RAF) 6850-99-096-3372 (Army)

Directions For Use

Before final treatment with Electrolube lubricants, contact surfaces should be clean and dry. For general removal of dirt, Electrolube Ultrasolve is recommended. Hardened dirt and tarnish, especially on larger contacts, should be removed by rubbing with an abrasive material, which can be impregnated with the lubricant to be used.

After cleaning non-wiping contacts, loosened tarnish should be removed before a final application of lubricant is made. Electrolube Contact Cleaning Strips (CCS) are recommended for this purpose. With wiping contacts, loosened tarnish will be pushed aside. This can be removed if desired, but is usually not necessary, due to the excellent lubricating and protective properties of the contact lubricant.

In production processes, Electrolube contact lubricant should be applied to the contact components as soon as possible after manufacture or plating to protect against handling contamination and tarnishing.

Typical Product Applications

The SOA can be used on all types of electrical contacts, but care should be taken to ensure that certain paints, rubbers, and thermoplastics are not near the area of the contact. A small area should be tested first to ensure compatibility.

SOA should be used on contacts that have very low contact forces and in applications where it will not migrate. Typical areas of use are small contacts, brushes, commutators, bearings, organ key contacts, jack plugs, push button switches, relays and uni-selectors.

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Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.