

## SGB Contact Treatment Grease

SGB (2X Grease) was developed as an extension of the No 2 Range (SGA and SOA) with increased plastics compatibility. This product development was necessary due to the use of thermoplastics in the electronics and automotive industries. SGB will significantly increase contact performance and lifetime. Separate data sheets are available for the diluted oil (EML), oil (SOB) and the low penetration grease (SGBH).

- Improves contact performance by increasing effective contact area
- Enhanced plastics compatibility; suitable for a range of plastics and rubbers (testing advised)
- Highly stable synthetic material, fully inhibited against oxidation and copper corrosion
- Excellent penetration and cooling properties; prevents arcing, thus reduces contact wear

|                  |                                      |            |
|------------------|--------------------------------------|------------|
| <b>Approvals</b> | <b>RoHS Compliant (2015/863/EU):</b> | <b>Yes</b> |
|------------------|--------------------------------------|------------|

### Typical Properties

|                                                        |                   |
|--------------------------------------------------------|-------------------|
| Colour                                                 | Beige             |
| Density (g/ml)                                         | 1.11              |
| Temperature Range (°C)                                 | -35 to +130       |
| Vapour Pressure                                        | 0.001 Torr @ 20°C |
| Evaporation Weight Loss (% 7 days @ 100°C)             | 3.73              |
| Evaporation Weight Loss (% 7 days @ 125°C)             | 3.90              |
| Copper Strip Corrosion (IP154 / ISO 2160)              | ≤1b               |
| Drop Point (IP32 / ISO 2176 (°C))                      | 250               |
| Cone Penetration Worked (ASTM D217, 60 strokes @ 20°C) | 320               |
| Cone Penetration Un-worked (ASTM D 217 @ 20°C)         | 310               |
| Cone Penetration Un-worked (ASTM D 217 @ -40°C)        | 180               |
| Consistency (NLGI)                                     | 1                 |
| Fliessdruck (Flow Pressure) (DIN 51805, mbar @ -40°C)  | 720               |
| Oil Bleed / Separation (IP121)                         | 6%                |
| Silver Corrosion (DIN 51759, 3 hrs @100°C)             | No Change         |
| Plastic Compatibility - ABS                            | Test              |
| Plastic Compatibility - PC                             | Test              |
| Thickener                                              | Clay              |
| Water Content (%)                                      | 0.6               |
| UV Trace                                               | No                |

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All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification.

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.

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BS EN ISO 9001:2008  
Certificate No. FM 32082

**Electrical Properties**

|                                |      |
|--------------------------------|------|
| Breakdown Voltage (BS148 (kV)) | 4.05 |
|--------------------------------|------|

**Base Oil Properties**

|                                                        |                      |
|--------------------------------------------------------|----------------------|
| Base Oil Type                                          | Poly Alkylene Glycol |
| Base Oil Viscosity @ 40°C (Kinematic Viscosity (cSt))  | 225                  |
| Base Oil Viscosity @ 100°C (Kinematic Viscosity (cSt)) | 37                   |
| Base Oil Viscosity Index (ASTM D 2270)                 | 214                  |
| Pour Point (ASTM D 97 (°C))                            | -37                  |
| Flash Point (COC ASTM D 92 (°C))                       | 214                  |

**Mechanical Properties**

|             |       |
|-------------|-------|
| 4 Ball Wear | 2.148 |
| Weld Load   | 126   |

| <u>Packing</u> | <u>Order Code</u> | <u>Shelf Life</u> | <u>Container Dimension</u>        | <u>NATO Stock No.</u> |
|----------------|-------------------|-------------------|-----------------------------------|-----------------------|
| 1Kg Bulk       | ESGB01K           | 72 Months         | 114mm (Diameter) x 120mm (Height) | 6850-99-075-6602      |
| 5Kg Bulk       | ESGB05K           | 72 Months         | 178mm (Diameter) x 235mm (Height) |                       |
| 12.5Kg Bulk    | ESGB12.5K         | 72 Months         | 254mm (Diameter) x 330mm (Height) |                       |
| 25Kg Bulk      | ESGB25K           | 72 Months         | 305mm (Diameter) x 406mm (Height) |                       |
| 200ml Aerosol  | ESGB200D          | 36 Months         |                                   | 6850-99-224-1974      |
| 20ml Syringe   | ESGB20S           | 48 Months         |                                   | 6850-99-220-4560      |
| 35ml Syringe   | ESGB35SL          | 48 Months         |                                   |                       |

The 12.5 and 25 kg grease drums have parallel sides for use with “follower plate” dispensing equipment for automated manufacturing lines.

**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.

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SGB can be applied by one of the following methods (although this list is not exhaustive):

**Manually** by way of a syringe or aerosol (SGB200D)

**Semi-automated** using syringe dispensing

**Fully automated** by way of a follower/pusher plate with dispensing system

In production processes, 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**

SGB can be used on all types of electrical contacts and with most types of thermoplastics. A small area should be tested first to ensure compatibility.

SGB is a non-melting product that will not migrate from vertical surfaces and will provide greater environmental protection than the oil. Thus the grease is preferable in industrial applications where heavy arcing is common. For example: battery terminals, knife switches, rheostats etc. The grease is also preferable in switches with a very long lifetime and high cycle rate, for example, the automotive switching industry.

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