ELECTROLUBE
THE SOLUTIONS PEOPLE

HTSP
Silicone Heat Transfer Compound Plus

HTSP is a highly thermally conductive non-curing heat transfer paste, designed for use as a thermal interface material. It is recommended where large amounts of heat need to be dissipated efficiently, ensuring the reliable thermal coupling of electronic components. HTSP is based on a silicone oil, offering an exceptionally wide operating temperature range.

- High thermal conductivity; optimum efficiency of heat dissipation
- Very low viscosity for ease of application; designed for use as a thermal interface material
- Based on a silicone oil; offers an exceptionally wide operating temperature range
- Non-curing paste; allows simple and efficient rework of components if required

Approvals	**RoHS-2 Compliant (2011/65/EU):**	**Yes**
Typical Properties	Colour:	Pale Grey
	Base:	Silicone Oil
	Thermo-conductive Component:	Powdered metal oxides
	Density @ 20°C (g/ml):	3.0
	Viscosity @ 1rpm (Pa s):	42-48
	Thermal Conductivity:	3.0 W/m.K
	Temperature Range:	-50°C to +200°C
	Weight Loss after 96 hours @ 100°C:	<0.8%
	Permittivity @ 106Hz:	4.9
	Volume Resistivity:	1 x 10^{15} Ω cm
	Dielectric Strength:	18 kV/mm

Description	Packing	Order-Code	Product-Code	Shelf Life
Silicone Heat Transfer Paste Plus	35ml Syringe	EHTSP35SL	HTSP35SL	36 months
	50 ml Tube	EHTSP50T	HTSP50T	36 months
	100ml Tube	EHTSP100T	HTSP100T	36 months
	830g cartridge	EHTSP830G	HTSP830G	36 months
	1 Kg Bulk	EHTSP01K	HTSP01K	36 months
	10 Kg Bulk	EHTSP10K	HTSP10K	36 months
	25 Kg Bulk	EHTSP25K	HTSP25K	36 months

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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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Directions for Use

Thermal pastes can be applied to the base and mounting studs of diodes, transistors, thyristors, heat sinks, silicone rectifiers and semi-conductors, thermostats, power resistors and radiators, to name but a few. When the contact surfaces are placed together, a firm metal-to-metal contact will only be achieved on 40 – 60% of the interface, depending on the smoothness of the surfaces. This means that air, which has relatively poor thermal conductivity, will account for the balance of the interface. Only a small amount of compound is required to fill these spaces and thus dramatically increase the effective surface area for heat transfer.

It is important to note that the quality of application of a thermal paste can be as important as the thermal conductivity of the material applied; best results are achieved when a uniform, thin coat is applied between the mating surfaces. Apply a thin layer of compound to one of the contact surfaces using a brush, spatula, roller, automated system or screen printing technique. Ensure that the entire interface is covered to avoid hot-spots from forming. Any excess paste squeezed out during the mounting process should be removed.

Additional Information

There are many methods of measuring thermal conductivity, resulting in large variances in results. Electrolube utilise a heat flow method which takes into account the surface resistance of the test substrate, thus offering highly accurate results of true thermal conductivity. Some alternative methods do not account for such surface resistance and can create the illusion of higher thermal conductivity. Therefore, when comparing thermal conductivity measurements it is important to know what test method has been utilised. For more information please contact the Electrolube Technical Department.

The rate at which heat flows is dependent on the temperature differential, the thickness and uniformity of the layer, and the thermal conductivity of the material. Products with the same comparable thermal conductivity value may have very different efficiencies of heat transfer in the end application depending on how successfully a thin even film can be applied.

A full range of heat transfer products are available from Electrolube: high thermal conductivity pastes (HTCP), silicone based pastes for very high temperature applications (HTS), gap filling materials (HTCPX), Silicone RTVs (TCOR, TCER), epoxy adhesives (TBS) and encapsulation resins (ER2220, UR5633, SC2003).

Bulk Packaging Specifications

Package Size	Inner Diameter	Height
310ml Euro-Cartridge (830g)	49.6mm	260mm + 15mm for Nozzle
25Kg Bulk Container	300mm	285mm

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