HTC
Heat Transfer Compound

HTC is a non-curing heat transfer paste, designed for use as a thermal interface material. It is recommended where the efficient and reliable thermal coupling of electronic components or heat dissipation between any surfaces are required. HTC is a non-silicone paste, suitable for applications where silicones are prohibited, thus avoiding issues with silicone and low molecular weight siloxane migration.

- General purpose thermal management paste; cost effective heat dissipation
- Based on a non-silicone oil; avoids issues with silicone and LMW siloxane migration
- Good thermal conductivity; designed for use as a thermal interface material
- Non-curing paste; allows simple and efficient rework of components if required

Approvals	**RoHS Compliant (2015/863/EU):**	**Yes**
	NATO Stock No. – EHTC10S:	**6850-99-775-5881**
	NATO Stock No. – EHTC20S:	**5835-99-775-5881**
	NATO Stock No. – EHTC35S:	**5975-99-512-1473**
Typical Properties	Colour:	White
	Base:	Blend of synthetic fluids
	Thermo-conductive Component:	Powdered metal oxides
	Density @ 20°C (g/ml):	2.04
	Cone Penetration @ 20°C:	300
	Viscosity @ 1rpm (Pa s):	202-205
	Thermal Conductivity (Guarded Hot Plate):	0.9 W/m.K
	Thermal Conductivity (Heat Flow):	0.7 W/m.K (calculated)
	Temperature Range:	-50°C to +130°C
	Weight Loss after 96 hours @ 100°C:	<1.0%
	Permittivity @ 1 GHz:	4.2
	Volume Resistivity:	1 x 10^{14} Ohms-cm
	Dielectric Strength:	42 kV/mm

Description	Packing	Order Code	Shelf Life
Heat Transfer Compound	2 ml Syringe	HTC02S	36 months
	10 ml Syringe	HTC10S	36 months
	20 ml Syringe	HTC20S	36 months
	35 ml Luer Lock Syringe	HTC35SL	36 months
	100 ml Tube	HTC100T	36 months
	700 gram Cartridge	HTC700G	36 months
	1 Kg Bulk	HTC01K	36 months
	25 Kg Bulk	HTC25K	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.

Ashby Park, Coalfield Way,
Ashby de la Zouch,
Leicestershire LE65 1JR
T +44 (0)1530 419 600
F +44 (0)1530 416 640
BS EN ISO 9001:2008
Certificate No. FM 32082

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	Diameter	Height
700g Cartridge	49.6mm	260mm + 15mm for Nozzle
25Kg Bulk Container	300mm	285mm

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