HTCPX_LV
Non-Silicone Heat Transfer Compound – Low Viscosity

HTCPX_LV provides the ultimate in thermal conductivity in a non-curing 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 is required. We recommend that compatibility tests be carried out on sensitive materials prior to large scale production. In all applications, HTCPX_LV will increase product quality, productivity, reduce maintenance costs and minimise rejects. HTCPX_LV is a non-silicone paste, suitable for applications where silicones are prohibited, thus avoiding issues with silicone and low molecular weight siloxane migration.

- Very low viscosity for ease of application; designed for use as a thermal interface material
- Exceptionally high thermal conductivity; aids rapid heat dissipation
- Based on a non-silicone oil; avoids issues with silicone and LMW siloxane migration
- Non-curing paste; allows simple and efficient rework of components if required

Approvals	**RoHS Compliant (2015/863/EU):**	**Yes**
Typical Properties	Colour:	Pale Grey
	Base:	Blend of synthetic fluids
	Flash Point of Base Oil:	> 280°C
	Thermo-conductive Component:	Powdered metal oxides
	Density @ 20°C (g/ml):	3.0
	Viscosity @ 1 rpm (Pa.s):	45-70
	Thermal Conductivity (Heat flow):	2.00 W/m.K
	Thermal conductivity (Guarded Hot Plate)	3.00 W/m.K (calculated)
	Temperature Range:	-50°C to +130°C
	Weight Loss after 96 hours @ 100°C:	< 1%
	Permittivity @ 1GHz:	4.2
	Volume Resistivity:	1 x 10^{14} Ohms-cm
	Dielectric Strength:	42 kV/mm

Packing	Order Code	Shelf Life	Container Dimension
900g Cartridge	HTCPX_LV900G	48 months	
12.5 Kg Bulk	HTCPX_LV12.5K	72 months	254 mm (Diameter) x 330 mm (Height)

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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: standard heat transfer pastes (HTC), 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).

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