HTCPX
Non-Silicone Heat Transfer Compound Plus - Xtra

HTCPX provides the ultimate in thermal conductivity in a non-curing paste, designed for use as a gap filling material. It is recommended where the efficient and reliable thermal coupling of electronic components or heat dissipation is required. HTCPX is a non-silicone paste, suitable for applications where silicones are prohibited, thus avoiding issues with silicone and low molecular weight siloxane migration.

- Exceptionally high thermal conductivity; aids rapid heat dissipation over uneven surfaces
- Very high viscosity, offering stability under vibration; ideal for use as a gap filling material
- 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
	Thermo-conductive Component:	Powdered metal oxides
	Density @ 20°C (g/ml):	3.1
	Cone Penetration @ 20°C:	250
	Viscosity @ 1rpm (Pa s):	606-670
	Thermal Conductivity (Guarded Hot Plate):	3.4 W/m.K (calculated)
	Thermal Conductivity (Heat Flow):	2.3 W/m.K
	Temperature Range:	-50°C to +180°C*
	Weight Loss after 96 hours @ 100°C:	<1.0%
	Permittivity @ 1GHz:	4.2
	Volume Resistivity:	1 x 10^{14} Ohms-cm
	Dielectric Strength:	42 kV/mm

*Application dependent; excursions to higher temperatures may be possible, testing in end-use conditions is advised.

Description	Packing	Order Code	Shelf Life
Heat Transfer Compound Plus – Xtra	700 gram cartridge	HTCPX700G	36 months
	25 Kg Bulk	HTCPX25K	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

HTCPX was developed as a thermally conductive gap filler. For gap filling applications the material can be dispensed either manually or via automated equipment into the desired location. The product should be tested to ensure the thickness of paste applied is suitable for the end application conditions. It should be noted that the thermally conductive pastes are just one layer in the system; dissipation from the heat generating source is achieved through many layers of different material before the heat is dissipated by free or forced convection. Therefore, a thermal paste will only aid the dissipation of heat if the interface where it is used has the lowest thermal conductivity within the system, i.e. is the rate determining step. The use of excess thermal paste will not offer an increase in the efficiency of heat transfer.

For other applications, HTCPX should be applied in the most appropriate manner for the application, avoiding any air inclusion and ensuring the product applied is as uniform as possible. A lower viscosity version of HTCPX is available if required (HTCPX-LV).

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 and high thermal conductivity pastes (HTC, HTCP), silicone based pastes for very high temperature applications (HTS), 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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