

# **Technical Data on Silicone-free Thermal Transfer Compound WLPF**

## **Application:**

WLPF heat conduction paste ensures satisfactory functioning as well as rapid and safe thermal conduction in making a thermal connection between a semiconductor and a heatsink.

The silicone-free heat conduction paste should always be used if there is a danger of contamination of contact systems by silicone.

### Purpose:

Using WLPF heat conduction paste the temperature lag between semiconductor components and heatsinks can be significantly reduced. WLPF is electrically non-conductive but is not an insulator, and it adapts itself perfectly to any unevenness in the surfaces being processed.

### **Special features:**

It is resistant to oxidation and ageing, suitable for use over a large temperature range, non toxic, has virtually no smell, low oil separation, very low thermal resistivity and it is to a large extent chemically neutral with respect to metallic and plastic materials.

The dielectric properties change slightly as a function of the service temperature. WLPF does not run out from the joint under a thermal load and it does not dry or harden.

### **Examples for applications:**

By applying WLPF heat conduction paste, optimum adaptation to any roughness in the surfaces of semiconductors and heatsinks is ensured. Air inclusions and poor conduction of heat are positively prevented, WLPF is successfully used for all kinds of components including transistors, diodes, thyristors and other integrated electronic circuits and components.

### Classification as a hazardous material:

See Material Safety Data Sheet



# <u>Technical Information on Silicone-free Thermal Transfer Compound</u> <u>WLPF</u>

#### Parameters:

powdered metallic oxides		
not measurable		DIN ISO 2176
265-295	Units	DIN ISO 2137 (acc. to)
approx. 2	[g/cm³]	DIN 51757
> 0.7 (typical 1) [W/mK]		
< 1	[%]	
< 1	[%]	
0.4		
electrically non-conductive but is not an insulator		
40	[KV/mm]	
		DIN 51805
≤ 250	mbar	
≤ 1400	mbar	
700 1000	mbar	
	powdered meta not measurable 265-295 approx. 2 > 0.7 (typical 1) < 1 < 1 0.4 electrically non- 40 ≤ 250 ≤ 1400 700 1000	powdered metallic oxides not measurable 265-295 Units approx. 2 $[g/cm^3]$ > 0.7 (typical 1) $[W/mK]$ < 1 $[\%]$ < 1 $[\%]$ 0.4 electrically non-conductive bu 40 $[KV/mm]$ $\leq 250$ mbar $\leq 1400$ mbar 700 1000 mbar

### Basic oil:

Туре	silicone-free synthetic liquid (ester oil)		
Cinematic viscosity			
at 40 ℃	approx. 90	mm²/s	DIN 51562
at 100 ℃	approx. 13	mm²/s	DIN 51562
Consistency	NLGI class	2 (3)	DIN 51818
Flash point	280	C	DIN ISO 2592
Pour point	-40	C	DIN ISO 3016
Service temperature	-40 +150	C	

### Durability / Storage conditions:

It is recommended that WLPF heat conduction paste is stored at room temperature. It must be used within 6 months of the date on which the container was filled.

#### Note:

The above data accords with up-to-date practice. Deviations within usual tolerances are possible but they will not affect the function.

Although the above information has been thoroughly prepared and checked, the rights to correct errors and to make technical modifications are reserved. Date of issue: 01 / 2009

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