

Keratherm® - KL 90, KL 91

Ceramic filled double-sided adhesive film - with or without fibre glass

Applications:

Thermal connection of

- CPUs, LEDs
- Flip Chips, DSPs, BGAs, PPGAs
- MOSFETS on heat sinks

For example in:

- power supplies and inverter modules
- computers
- telecommunication electronics
- automotive electronics



Low thermal contact resistances can be achieved with a very reliable adhesive strength on different surfaces.

There are no mechanical fixation with clips, screws or rivets needed.

Due to the soft surface finish tolerances can be compensated very good. Light weight, easy handling and high elasticity are further advantages.

Properties	Unit	KL 90	KL 91
Color		black	black
Basis		acrylate	acrylate
Reinforcement (fibre glass)		without	with
Thermal properties			
Thermal resistance* R_{th}	K/W	0.52	0.55
Thermal impedance* R_{ti}	$^{\circ}\text{Cmm}^2/\text{W}$	208	220
	Kin^2/W	0.32	0.34
Thermal conductivity*	W/mK	1.40	1.35
Electrical properties			
Breakdown voltage $U_{d; ac}$	kV	6.0	6.0
Dielectric breakdown $E_{d; ac}$	kV/mm	20.0	20.0
Volume resistivity	Ωm	2.6×10^4	2.6×10^4
Dielectric loss factor $\tan \delta$	1	30.5×10^{-2}	30.5×10^{-2}
Dielectric constant ϵ_r	1	18.5	18.5
Mechanical properties			
Measured thickness	mm	0.300	0.300
Density	g/cm^3	1.98	1.87
Hardness	Shore A	45	59
Tensile strength (single adhesive film)	MPa	0.25	11.28
TML	Ma.%	0.15	0.15
Flame rating	UL	94V-0	94V-0***
Possible thickness*	mm	0.15 – 0.5	0.3

***Kerafol test according to UL

Keratherm® KL 90 and KL 91 are thermal conducting electrical insulating double sided adhesive films. They have an excellent, permanent adhesive strength with high thermal conductivities and at the same time very good insulation characteristics.

Compressibilities of KL 90 and KL 91

