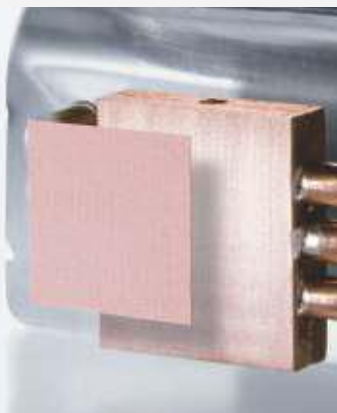


## Standard Films: Keratherm Red



This film is especially suitable for high-power applications. It has excellent thermal electrical properties. Thanks to its good performance, the Keratherm red can be used reliably in densely packed electronic applications.

### APPLICATIONS

- "High End" Thermal Solutions
- Controlling Boards
- BGA Applications
- Hard-Disk Drives

DISCLAIMER: Purchaser shall be solely responsible for determining the adequacy of the product for any and all uses which the purchaser shall apply the product, and the application of the product by the purchaser shall not be subject to any implied warranty of fitness for that purpose.

Properties	symbol	unit	86/81	86/82 w/fiberglass	86/83 w/fiberglass
Color			red	red	red
<b>Thermal Properties</b>					
Thermal Resistance	$R_{th}$	K/W	0.10	0.09	0.07
Thermal Impedance	$R_{ti}$	$^{\circ}\text{Cmm}^2/\text{W}$	39	35	31.2
		$\text{Kin}^2/\text{W}$	0.07	0.05	0.04
Thermal Conductivity	$\lambda$	W/mK	5.5	6.5	8.0
<b>Electrical Properties</b>					
Breakdown Voltage	$U_{d,ac}$	kV	1.0	1.0	1.0
Dielectric Breakdown	$E_{d,ac}$	KV/mm	4.0	4.0	4.0
Volume Resistivity		$\Omega\text{cm}$	$2.0 \times 10^{14}$	$2.0 \times 10^{14}$	$5.9 \times 10^{15}$
Dielectric Loss Factor	$\tan \delta$	1	$1.9 \times 10^{-3}$	$1.4 \times 10^{-3}$	$3.0 \times 10^{-2}$
Dielectric Constant	$\epsilon_r$	1	2.3	2.4	1.83
<b>Mechanical Properties</b>					
Overall Thickness ( $\pm 10\%$ )		mm	0.200	0.250	0.250
Hardness		Shore A	25 - 35	60 - 70	50 - 60
Tensile Strength		N/mm <sup>2</sup>	0.6	20.0	10.0
Elongation		%	20	2	2
<b>Physical Properties</b>					
Application Temperature		$^{\circ}\text{C}$	-40 to +200	-40 to +200	-40 to +200
Density		g/cm <sup>3</sup>	1.36	1.23	1.10
Flame class		UL	-	94V-0	-
Possible Thickness		mm	0.15 - 0.25	0.25 - 0.50	0.25 - 0.50

On request, these films can also be supplied with fiberglass reinforcement and with or without adhesive coating. The excellent thermal resistance of this film enables the optimum heat transfer to the heat sink.

### Options for Keratherm Red (Standard Film):

Type	Film Structure	Overall Thickness	TML	Tensile Strength	Thermal Resistance	
		mm	Ma.-%	N/mm <sup>2</sup>	K/W	Kin <sup>2</sup> /W
86/82lb	86/82 with fiberglass and adhesive coating	0.250	< 0.29	10	0.14	0.09

The following thicknesses are available: 0.250 mm, 0.3 mm, 0.4 mm, 0.5 mm