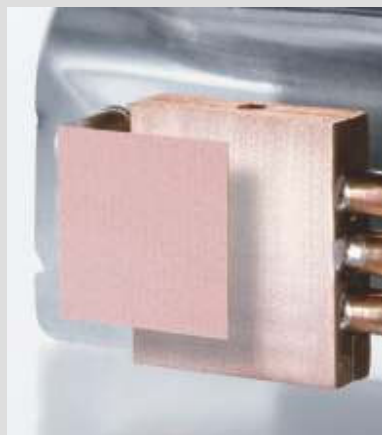


## Keratherm® - red Standard films

### Applications:

- “High End” solutions
- Control boards
- BGA applications
- Hard-disc-drives



Properties	Unit	86/81	86/82 with fibre glass	86/83 with fibre glass
Colour		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	$1.9 \times 10^{-3}$	$1.4 \times 10^{-3}$	$30 \times 10^{-3}$
Dielectric constant $\epsilon_r$	1	2.3	2.4	1.83
<b>Mechanical properties</b>				
Overall thickness (+/-10%)	mm	0.200	0.250	0.250
Hardness	Shore A	30	65	55
Tensile strength	N/mm <sup>2</sup>	0.6	20	10
Elongation	%	20	2	2
<b>Physical properties</b>				
Application temperature	$^{\circ}\text{C}$	-40 to +200		
Density	g/cm <sup>3</sup>	2.9	2.35	2.30
Flameclass	UL	-	94V-0	-

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

### Options for Keratherm® -red

Type	Film structure	Overall thickness mm	TML Ma.-%	Tensile strength N/mm <sup>2</sup>	Thermal resistance	
					K/W	$\text{Kin}^2/\text{W}$
86/821b	86/82 with fibre glass as low bleeding	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