

## Keratherm<sup>®</sup> - Sofftherm<sup>®</sup> 86/225

### Applications:

- Heat pipe thermal solutions
- Automotive engines
- Control systems
- Control units



Properties	Unit	86/225
Colour		orange
<b>Thermal properties</b>		
Thermal resistance $R_{th}$	K/W	< 0.60
Thermal impedance $R_{\theta}$	$^{\circ}\text{Cmm}^2/\text{W}$ $\text{Kin}^2/\text{W}$	> 218 < 0.32
Thermal conductivity $\lambda$	W/mK	> 2.0
<b>Electrical properties</b>		
Breakdown voltage $U_{d; ac}$	kV	> 6.0
Dielectric breakdown $E_{d; ac}$	kV/mm	> 12.0
Volume resistivity (100V)	$\Omega\text{m}$	$2.2 \times 10^{11}$
Dielectric loss factor $\tan \delta$ (1kHz)	1	0.001
Dielectric constant $\epsilon_r$ (1kHz)	1	3.6
<b>Mechanical properties</b>		
Measured thickness (+/-10%)	mm	0.5
Hardness	Shore 00	30 - 45
Youngs modulus*	N/cm <sup>2</sup>	58
<b>Physical properties</b>		
Density	g/cm <sup>3</sup>	1.65
Application temperature	$^{\circ}\text{C}$	-40 to +180
TML	Ma. %	< 0.44
Flame rating**	UL	94V-0
Possible thickness	mm	0.5 – 5.0

\*Youngs modulus sample size 30mmx30mmx2.5mm; variable contact pressure; compression 50% of the measured thickness

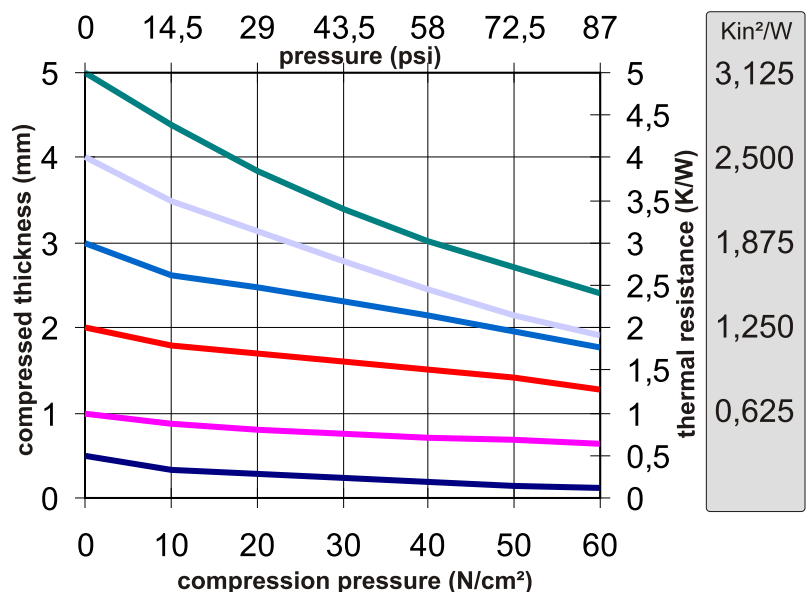
\*\*Kerafol test according to UL

This new single-layer fiberglass-reinforced Sofftherm<sup>®</sup> film is produced in thicknesses from 0.5 mm to 5.0 mm and has good self-adhesive behavior on both sides. Good thermal values and very good dielectric properties characterize this film.

The film's ideal Shore hardness guarantees very good compressibility and good relaxation, along with vibration damping characteristics.

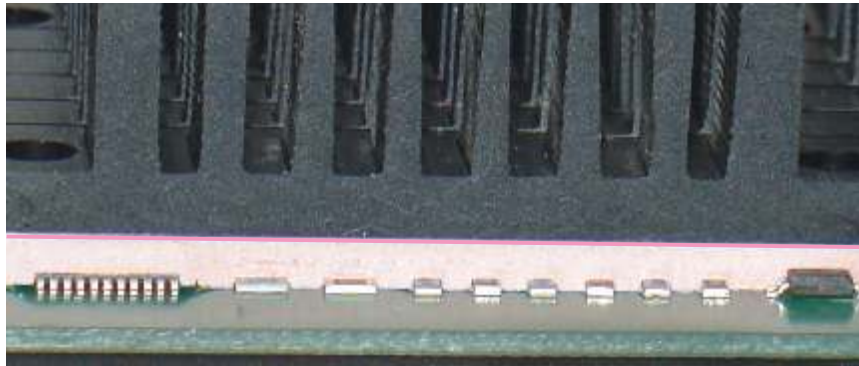
Operation areas for this economical film include heat pipes, automotive applications, control systems and control units.

### Compressibility Sofftherm<sup>®</sup> 86/225



## Application Note for Keratherm® - Softtherm® Films

Softtherm® materials are highly compressible, best conformable, low-stress Gap-Filler



**Keratherm® Softtherm® films are a combination of two basic materials:**

1. 86/200 and 86/210: light pink side is the carrier for the conformable gel itself (pink should face to the flat cover or case)  
86/250 and 86/255: white side is the carrier for the conformable gel itself (white should face to the flat cover or case)
2. 86/200 and 86/210: yellow is the compressible and conformable soft side (SMD-side / rough surface side)  
86/250 and 86/255: pink-red side is the compressible and conformable soft side (SMD-side / rough surface side)

### Handling:

Remove liner from soft conformable side (yellow on 86/200 , 86/210, pink-red on 86/250 , 86/255), and place Softtherm on the rough uneven or SMD-board side to conform around the parts

Remove liner from carrier side (pink on 86/200 , 86/210, white on 86/250 , 86/255) and install case, cover or top plate.

If you use the K-Version with adhesive either on light –pink (86/200 , 86/210) or white (86/250, 86/255) side you might remove this adhesive protection liner first, place the carrier side to the case, flat cover side and before installing your application box you remove the liner on the GEL soft side.

Assembly your application and apply mounting pressure to make the material conforming around the parts, max compression should not exceed 40 % of original material thickness