

Standard Films: Keratherm White



The highly thermal conductive white group, with its well balanced thermal and electrical or dielectric behavior, is created by filling a silicone elastomer base with aluminum oxide.

APPLICATIONS

- Power supplies
- Audio and video components
- White Goods
- Power Converters (AC-DC, DC-DC)
- Engine controllers

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 | 86/30 Basic film |
|----------------------------------|---------------|--|----------------------|
| Color | | | white |
| Thermal Properties | | | |
| Thermal Resistance | R_{th} | K/W | 0.22 |
| Thermal Impedance | R_{ti} | $^{\circ}\text{Cmm}^2/\text{W}$ Kin^2/W | 90 0.13 |
| Thermal Conductivity | λ | W/mK | 2.5 |
| Electrical Properties | | | |
| Breakdown Voltage | $U_{d;ac}$ | kV | 1.5 |
| Dielectric Breakdown | $E_{d;ac}$ | KV/mm | 7.0 |
| Volume Resistivity | | Ωcm | 2.5×10^{11} |
| Dielectric Loss Factor | $\tan \delta$ | 1 | 2.2×10^{-2} |
| Dielectric Constant | ϵ_r | 1 | 3.0 |
| Mechanical Properties | | | |
| Overall Thickness ($\pm 10\%$) | | mm | 0.225 |
| Hardness | | Shore A | 70 - 80 |
| Tensile Strength | | N/mm ² | 1.5 |
| Elongation | | % | 31 |
| Physical Properties | | | |
| Application Temperature | | $^{\circ}\text{C}$ | -60 to +250 |
| Density | | g/cm ³ | 2.33 |
| Flame class | | UL | 94V-0 |
| Possible Thicknesses | | mm | 0.125 – 0.500 |

An increase in mechanical strength can be achieved by fiberglass reinforcement. Both unreinforced and reinforced film types can optionally be supplied with an adhesive coating. In general however, the very good self-adhesion of the film will be sufficient for most mounting required.

Options for Keratherm White (Standard Film):

| Type | Film Structure | Overall Thickness | Tensile Strength | Thermal Resistance | |
|--------------|--|-------------------|-------------------|--------------------|---------------------|
| | | mm | N/mm ² | K/W | Kin ² /W |
| 86/10 | 86/30 with fiberglass | 0.225 | >7.5 | 0.30 | 0.15 |
| 86/20 | 86/30 with fiberglass and adhesive coating | 0.250 | >7.5 | 0.49 | 0.19 |
| 86/40 | 86/30 with adhesive coating | 0.250 | 2.0 | 0.37 | 0.17 |

The following thicknesses are available: 0.125 mm, 0.225 mm, 0.3 mm, 0.4 mm, 0.5 mm