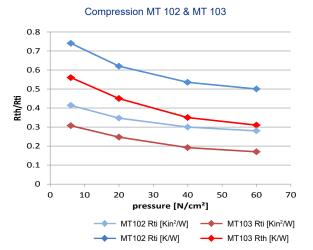


MT 102 & MT 103 **KERATHERM®** silicone free MT-Films

Applications

- Automotives
- High voltage technology
- Power converters (AC-DC, DC-DC)



Benefits

- Very good mechanical properties
- Liquid assembly
- Silicone free

Colour blue red Thermal Properties K/W 0.53 0.39 Thermal resistance R_{in} K/W 0.053 0.39 Thermal impedance R_{in} °Cmm²/W 200 156 Kin²/W 0.28 0.21 Thermal conductivity λ W/mK 1.1 1.8 Electrical Properties Electrical Properties 25.0 25.0 Breakdown voltage $U_{d,ac}$ kV 10.0 10.0 Dielectric breakdown $E_{d,ac}$ kV/mm 25.0 25.0 Volume resistivity Ω m 2.2 x 10 ¹⁰ 4.7 x 10 ¹⁰ Dielectric loss factor tan δ 1.0 x 10-3 1.0 x 10-3 Dielectric constant ϵ_r 2.7 2.6 Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A 65 - 75 70 - 80 Tensile strength N/mm² 2.0 2.0 Elongation % 1000 200 Physical Properties 2.0 2.0 2.0 Density g/cm³ 1.87 1.88	Properties	Unit	MT 102	MT 103
Thermal resistance R_{th} K/W 0.53 0.39 Thermal impedance R_{ti} °Cmm²/W 200 156 Kin²/W 0.28 0.21 Thermal conductivity λ W/mK 1.1 1.8 Electrical Properties 10.0 10.0 Dielectric breakdown voltage $U_{d,ac}$ kV 10.0 10.0 25.0 Volume resistivity Ω m 2.2 x 10 ¹⁰ 4.7 x 10 ¹⁰ 10.4 10.3 10.0 x 10.3 Dielectric loss factor tan δ 1.0 x 10.3 1.0 x 10.3 1.0 x 10.3 10.0 x 10.3 Dielectric constant ε_r 2.7 2.6 Mechanical Properties 2.7 2.6 Mechanical Properties Nmm 0.250 0.280 1.0 x 10.3 1.0 x 10.3 1.0 x 10.3 Hardness Shore A 65 - 75 70 - 80 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 </td <td>Colour</td> <td></td> <td>blue</td> <td>red</td>	Colour		blue	red
Thermal impedance R _i °Cmm²/W 200 156 Kin²/W 0.28 0.21 Thermal conductivity λ W/mK 1.1 1.8 Electrical Properties Breakdown voltage U _{d, ac} kV 10.0 10.0 Dielectric breakdown E _{d, ac} kV/mm 25.0 25.0 Volume resistivity Ω m 2.2 x 10 ¹⁰ 4.7 x 10 ¹⁰ Dielectric loss factor tan δ 1.0 x 10 ³ 1.0 x 10 ³ Dielectric constant ε_r 2.7 2.6 Mechanical Properties 2.0 2.0 Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A 65 - 75 70 - 80 Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0 <td>Thermal Properties</td> <td></td> <td></td> <td></td>	Thermal Properties			
Kin²/W0.280.21Thermal conductivity λ W/mK1.11.8Electrical PropertiesBreakdown voltage U _{d: ac} kV10.010.0Dielectric breakdown E _{d: ac} kV/mm25.025.0Volume resistivity Ω m2.2 x 10 ¹⁰ 4.7 x 10 ¹⁰ Dielectric loss factor tan δ 1.0 x 10 ⁻³ 1.0 x 10 ⁻³ Dielectric constant ϵ_r 2.72.6Mechanical Properties10.250Measured thickness (+/-10%)mm0.2500.280HardnessShore A65 - 7570 - 80Tensile strengthN/mm²2.02.0Elongation%> 1000200Physical Properties-40 to +125Application temperature°C-40 to +125-40 to +125Densityg/cm³1.871.88Flame ratingUL-94V-0V-0	Thermal resistance $R_{_{\mathrm{th}}}$	K/W	0.53	0.39
Thermal conductivity λ W/mK1.11.8Electrical PropertiesKV10.010.0Breakdown voltage U _{diac} kV10.010.0Dielectric breakdown E _{diac} kV/mm25.025.0Volume resistivity Ω m2.2 x 10 ¹⁰ 4.7 x 10 ¹⁰ Dielectric loss factor tan δ 1.0 x 10 ⁻³ 1.0 x 10 ⁻³ Dielectric constant ε_r 2.72.6Mechanical PropertiesNMeasured thickness (+/-10%)mm0.2500.280HardnessShore A65 - 7570 - 80Tensile strengthN/mm²2.02.0Elongation%> 1000200Physical PropertiesApplication temperature°C-40 to +125-40 to +125Densityg/cm³1.871.88Flame ratingUL-94V-0V-0	Thermal impedance $R_{_{ti}}$	°Cmm²/W	200	156
Electrical Properties kV 10.0 10.0 Dielectric breakdown $E_{d, ac}$ kV 10.0 10.0 Dielectric breakdown $E_{d, ac}$ kV/mm 25.0 25.0 Volume resistivity Ω m 2.2×10^{10} 4.7×10^{10} Dielectric loss factor tan δ 1.0×10^{-3} 1.0×10^{-3} Dielectric constant ε_r 2.7 2.6 Mechanical Properties Neasured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A $65 - 75$ $70 - 80$ Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0		Kin²/W	0.28	0.21
Breakdown voltage U _{d; ac} kV 10.0 10.0 Dielectric breakdown E _{d; ac} kV/mm 25.0 25.0 Volume resistivity Ω m 2.2 x 10 ¹⁰ 4.7 x 10 ¹⁰ Dielectric loss factor tan δ $1.0 \times 10^{\cdot3}$ $1.0 \times 10^{\cdot3}$ Dielectric constant ε_r 2.7 2.6 Mechanical Properties 2.7 2.6 Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A $65 - 75$ $70 - 80$ Tensile strength N/mm ² 2.0 2.0 Elongation % > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm ³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Thermal conductivity λ	W/mK	1.1	1.8
Dielectric breakdown $E_{d,ac}$ kV/mm 25.0 25.0 Volume resistivity Ω m 2.2×10^{10} 4.7×10^{10} Dielectric loss factor tan δ 1.0×10^{-3} 1.0×10^{-3} Dielectric constant ϵ_r 2.7 2.6 Mechanical Properties 2.7 2.6 Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A $65 - 75$ $70 - 80$ Tensile strength N/mm² 2.0 2.0 Elongation $\%$ > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Electrical Properties			
Volume resistivity Ω m 2.2×10^{10} 4.7×10^{10} Dielectric loss factor tan δ 1.0×10^{-3} 1.0×10^{-3} Dielectric constant ε_r 2.7 2.6 Mechanical Properties 2.7 2.6 Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A $65 - 75$ $70 - 80$ Tensile strength N/mm² 2.0 2.0 Elongation $\%$ > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm ³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Breakdown voltage U _{d; ac}	kV	10.0	10.0
Dielectric loss factor tan δ 1.0×10^3 1.0×10^3 Dielectric constant ε_r 2.7 2.6 Mechanical Properties 2.7 2.6 Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A $65 - 75$ $70 - 80$ Tensile strength N/mm² 2.0 2.0 Elongation $\%$ > 1000 200 Physical Properties $-40 \text{ to } +125$ $-40 \text{ to } +125$ Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Dielectric breakdown E _{d; ac}	kV/mm	25.0	25.0
Dielectric constant ε _r 2.7 2.6 Mechanical Properties Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A 65 - 75 70 - 80 Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties 200 200 200 Physical network Shore A -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Volume resistivity	Ωm	2.2 x 10 ¹⁰	4.7 x 10 ¹⁰
Mechanical Properties Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A 65 - 75 70 - 80 Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Dielectric loss factor tan $\boldsymbol{\delta}$		1.0 x 10 ⁻³	1.0 x 10 ⁻³
Measured thickness (+/-10%) mm 0.250 0.280 Hardness Shore A 65 - 75 70 - 80 Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Dielectric constant ε _r		2.7	2.6
Hardness Shore A 65 - 75 70 - 80 Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Mechanical Properties			
Tensile strength N/mm² 2.0 2.0 Elongation % > 1000 200 Physical Properties	Measured thickness (+/-10%)	mm	0.250	0.280
Elongation % > 1000 200 Physical Properties <td>Hardness</td> <td>Shore A</td> <td>65 - 75</td> <td>70 - 80</td>	Hardness	Shore A	65 - 75	70 - 80
Physical Properties°C-40 to +125-40 to +125Densityg/cm³1.871.88Flame ratingUL-94V-0V-0	Tensile strength	N/mm²	2.0	2.0
Application temperature °C -40 to +125 -40 to +125 Density g/cm³ 1.87 1.88 Flame rating UL-94 V-0 V-0	Elongation	%	> 1000	200
Densityg/cm³1.871.88Flame ratingUL-94V-0V-0	Physical Properties			
Flame rating UL-94 V-0 V-0	Application temperature	°C	-40 to +125	-40 to +125
5	Density	g/cm³	1.87	1.88
Possible thickness mm 0.25 0.28	Flame rating	UL-94	V-0	V-0
	Possible thickness	mm	0.25	0.28

Thermoplastic elastomer tape with very good insulating behavior and excellent mechanical and good thermal characteristics.

For assistance contact P: 847-255-4400 F: 847-255-0192 sales@hilltech.com http://www.hilltech.com

Data for engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.



NOTE:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. KERAFOL® is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. All specifications are subject to change without notice. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded. In case KERAFOL® would be nevertheless held liable, on whatever legal ground, KERAFOL®'s liability will in no event exceed the amount of the concerned delivery. All KERAFOL® products are sold pursuant to the KERAFOL®'s Terms and Conditions of sale and delivery in effect from time to time, a copy of which will be furnished upon request.

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