KERAFOL
Keramische Folien GmbH & Co. KG

KERATHERM®

Thermally Conductive Silicone Free Film

Made In Germany

Overview:

KERATHERM® thermally conductive silicone free ceramic-filled film series are designed to be highly conductive that provide well-balanced thermal, electrical, dielectric behaviour providing a thin bond-line for use in application that are concerned about silicone contamination.

Applications:

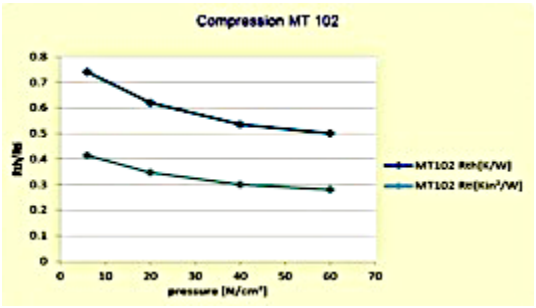
■ Aerospace ■ Automotive ■ Laser Equipment ■ Lighting Systems ■ Medical Equipment ■ Disk Drives ■ Telecommunication ■ CD-ROM Drives ■ HAMR ■ Optical Devices ■ Power Converter



Non-Reinforced Thermally Conductive Silicone Free Film

Properties	Unit	MT 102	MT 103	U 80	U 85	U90	Test Method
Colour	-	Blue	Red	Blue	Light Blue	Light Blue	Visual
Reinforcement	-	None	None	None	None	None	Visual
Thermal Properties							
Thermal resistance R_{th}	K/W	0.53	0.39	0.2	0.165	0.082	Kerafol
Thermal impedance R_{ti}	°Cmm²/W	200	156	73	60.2	32.9	Kerafol
	Kin²/W	0.28	0.21	0.11	0.091	0.05	Kerafol
Thermal conductivity λ	W/m-K	1.1	1.8	1.8	3.0	6	ASTM D5470
Electrical Properties							
Breakdown voltage $U_{d;ac}$	kV	10	10	4	6.0	4	ASTM D149
Dielectric breakdown $E_{d;ac}$	kV/mm	25	25	25	30	25	ASTM D149
Volume resistivity	Ωm	2.2×10^{10}	4.7×10^{10}	1.44×10^{14}	4.08×10^{9}	2.0×10^{11}	ASTM D257-3
Dielectric loss factor tan σ	1	1.0×10^{-3}	1.0×10^{-3}	13×10^{-3}	26×10^{-3}	13.7×10^{-3}	ASTM D150
Dielectric constant ε_r	1	2.68	2.61	3.2	1.96	3.1	ASTM D150
Mechanical Properties							
Measured thickness (+/-10%)	mm	0.250	0.280	0.150	0.200	0.200	ASTM D734
Hardness	Shore A	65 - 75	70 - 80	80 - 90	70 - 85	70 - 80	ASTM D2240
Tensile strength	N/mm²	2	2	3	-	2	ASTM D412
Elongation	%	>1000	200	130	-	150	ASTM D412
Physical Properties							
Operating temperature	°C	-40 to +125	-40 to +125	-40 to +125	-40 to +150	-40 to +150	Kerafol
Density	g/cm³	1.87	1.88	2.26	1.44	1.46	Kerafol
Flame rating	UL 94	VO	VO	VO	VO	VO	U.L. E140693
Total Mass Loss (TML)	Ma.-%	-	-	-	-	-	ASTM E 595
Thickness available	mm	0.250	0.280	0.150, 0.300	0.125, 0.200, 0.300	0.100, 0.200, 0.300	Kerafol

* Data provided are nominal values that should not be used to write specifications. Users are advised to test and decide the suitability of the product to fit their applications.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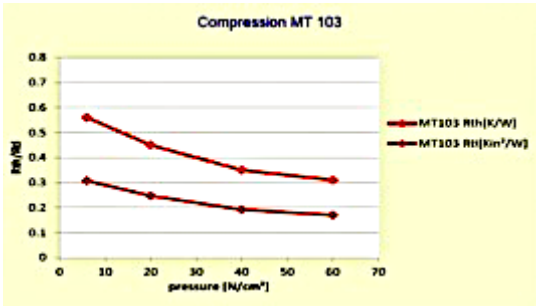
Rth/Rti
pressure [N/cm²]
MT102 Rth[K/W]
MT102 Rti[Kin²/W]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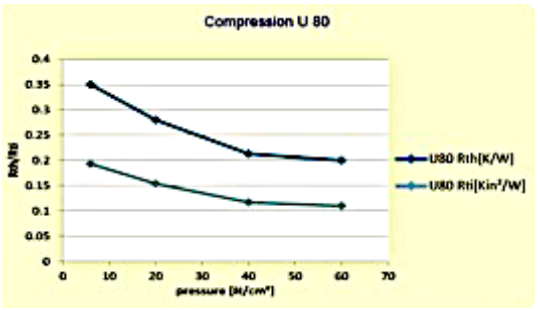
MT103 Rth[K/W]
MT103 Rti[Kin²/W]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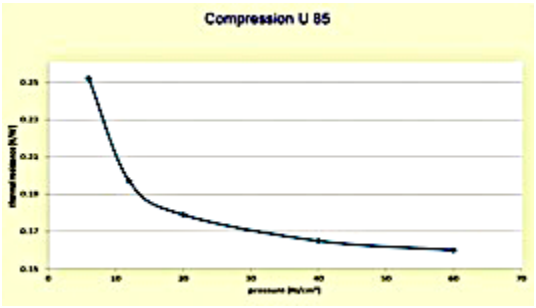
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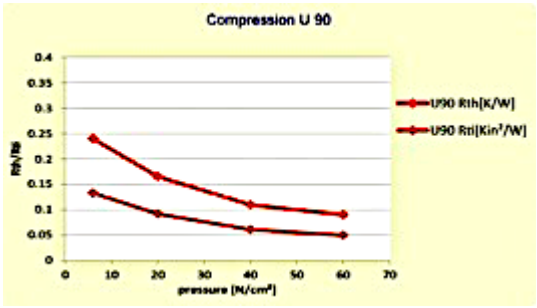
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U90 Rti[Kin²/W]