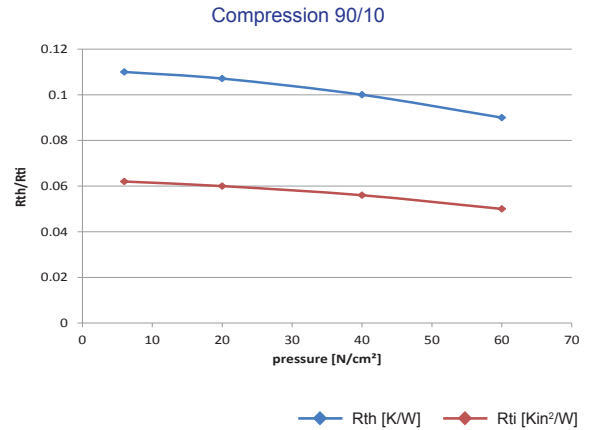


# 90/10, 90/15 & 90/20

## 100% pure graphite

### Applications

- ◆ chipsets
- ◆ memory chips
- ◆ micro BGA



Properties	Unit	90/10
Colour		black
<b>Thermal Properties</b>		
Thermal resistance $R_{th}$	K/W	0.09
Thermal impedance $R_{ti}$	°Cmm <sup>2</sup> /W	36
	Kin <sup>2</sup> /W	0.05
Thermal conductivity $\lambda z$ (x/y)	W/mK	5.5 (200)
<b>Electrical Properties</b>		
Breakdown voltage $U_{d; ac}$	kV	conductive
Electrical resistance $z$ (x/y)	$\Omega\mu m$	650 - 700 (6 - 8)
<b>Mechanical Properties</b>		
Measured thickness (+/-10%)	mm	0.200
Hardness	Shore D	25 - 35
Tensile strength	N/mm <sup>2</sup>	5.5
Elongation	%	10
<b>Physical Properties</b>		
Application temperature	°C	-40 to +500
Density	g/cm <sup>3</sup>	> 1.0
Total mass loss (TML)	Ma. -%	0.01
Flame rating	UL-94	V-0
Possible thickness	details see page 58	

Graphite Films are based on 100% pure graphite. The films are available as un-coated types and, for specific applications, with filled adhesive or standard adhesives. Due to their high thermal conductivity they are used in the CPU sectors for example.

### Options

Type	Film structure	Overall thickness	Tensile strength	Thermal resistance	
		mm	N/mm <sup>2</sup>	K/W	Kin <sup>2</sup> /W
90/15	90/10 with filled adhesive	0.200	6.0	0.07	0.04
90/20	90/10 with standard adhesive	0.250	5.5	0.16	0.10

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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