Hightech aus der Oberpfalz

Keratherm[®] - PCE and PCM PCE 86/114, PCE 86/117, PCM 471

Properties	Unit	86/114	86/117	PCM 471
Colour		grey	grey	grey
Compound		Elastomer	Elastomer	filled hot-setting wax
Thermal properties				
Thermal resistance R _{th}	K/W	0.15	0.06	0.07
Thermal impedance	°Cmm²/W Kin²/W	61 0.089	21.9 0.033	25.6 0.039
Thermal conductivity λ	W/mK	4.0	3.0	4.0
Electrical properties				
Breakdownvoltage U _{d; ac}	kV	1.2	1.0	1.0
Dielectric breakdown E _{d; ac}	kV/mm	5.0	4.0	5.0
Volume resistivity	Ωm	0.2 x 10 ¹⁰	3.2 x 10 ¹⁰	-
Dielectric loss factor tan δ (1kHz)	1	12 x 10 ⁻³	21 x 10 ⁻³	-
Dielectric constant (1kHz)	1	2.0	3.19	-
Mechanical properties				
Measured thickness (+/-10%)	mm	0.250	0.250	0.200
Hardness	Shore	70 – 90 (00)	55 – 75 (00)	70 – 80 (A)
Softening interval	°C	70 - 95	65 - 85	46
Physical properties				
Density	g/cm³	1.25	1.38	1.82
Application temperature	°C	-40 to +125	-40 to +125	-40 to +125
Flame rating	UL	-	94V - 0	-
Possible thickness*	mm	0.250	0.250	0.200

Applications: • Notebooks • Desktop CPU's • IGBT Units

Advantages of PCE-material:

- Very good compressibility
- Phase-change characteristic without containing wax material
- No melting point but softening interval
- Electrical insulating

- Excellent reworkability
- Can be used for automatic production
- Single-sided adhesive
- RoHS / environmently friendly
- Also suitable for dispensing

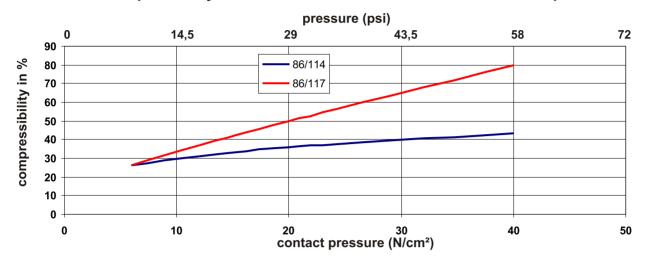
Advantages of PCM-material:

- combination of hot-melt wax with or without support
- filling of smallest irregularities between the power module and heat sink
- melts at various temperatures

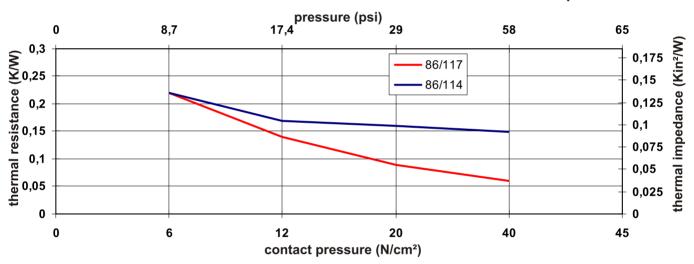
- improves the contact between the surfaces and increases the heat transfer
- special design for easy use and storage

The data presented in this leaflet are in accordance with the present state of our knowledge. All statements, technical information and recommendations herein are based on tests we believe to be reliable. The customer is thereby not absolved from carefully checking all supplies immediately on receipt. The recommendations made in this catalogue should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. Before using, user shall determine the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection there with. We reserve the right to alter product constants within the scope of technical process or new developments. The recommendations do not absolve the customer from the obligation of investigating the possibility of infringement of third parties right and, if necessary, clarifying the position. Sellers' and manufacturer' only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable either in tort or contract for any loss or damage, direct or incidental, or consequential, including loss of profits or revenue arising out of the use or the inability to use a product. No statement, purchase order or recommendations by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer. last update: 06/2011

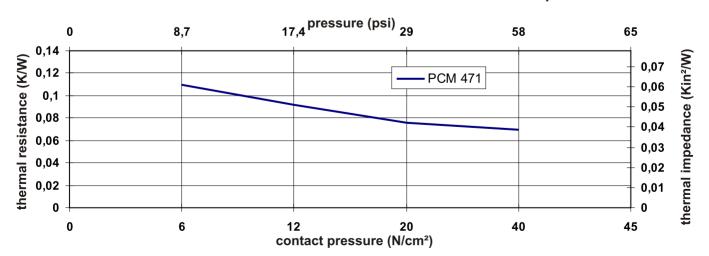
Compressibility of 86/114 and 86/117 in relation with the contact pressure



Thermal resistance of 86/114 and 86/117 in relation with the contact pressure



Thermal resistance of PCM 471 in relation with the contact pressure



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