Dr.D. Müller AHLHORN

Precision components
made of flexible and rigid materials

Thermal conductivity products

Thermipad® TP 22823

Description:	Thermipad® TP 22823 is a silicone-containing, highly thermally conductive GEL thermal conductive film. The soft, elastic and compressible material compensates for air gaps and surface unevenness between heat-generating components and cooling surfaces.
Application:	Thermipad® TP 22823 is used in: Thermal bonding of electronic components to heat sinks and housings.
Color:	Pink
Delivery forms:	Panels with usable area 300 × 200 mm and material thickness from 0.5 to 5 mm. Individual cuts and other dimensions on request.
Storage conditions:	−20 to +50 °C at 45–85% relative humidity; Shelf life: 12 months.

Zeppelinring 18 | D-26197 Ahlhorn | Tel.: +49 (0) 4435 97 10 10 | Fax: +49 (0) 4435 97 10 11
info@mueller-ahlhorn.com | www.mueller-ahlhorn.com | Seat of the company: Ahlhorn
Managing Director: Dr. Michael Müller | AG Oldenburg: HRB 209026 | Ust. ID-Nr.: DE 295969093
St.-Nr.: 68/207/07677 | Certified according to ISO 9001:2015 and ISO 14001:2015
UL recognised repacker E341377

- Production and distribution of electrical insulation materials, thermally conductive products, seals and technical films
- Production of stamped parts, blanks and moulded parts
- Cutting/assembly of films and adhesive tapes
- CNC machining, laser cutting and water jet cutting

Dr.D. Müller AHLHORN

Precision components
made of flexible and rigid materials

Thermipad® TP 22823

Properties	Unit	Value				
Material thickness	mm	0,5	1	1,5	2	2,5
Hardness	Shore 00	30				
Thermal conductivity	W/(m·K)	1,4				
Heat flux at 100 kPa	°C·cm²/W	3,9	5,8	7,3	10	11,9
Heat flux at 100 kPa	°C·in²/W	0,6	0,9	1,13	1,55	1,84
Temperature range	°C	−40 to +150				
Dielectric strength	kV/mm	17				
Contact resistance (spec)	Oh·m	2.4×10^{11}				
Dielectric constant (50 Hz)	-	5				
Dielectric constant (1 kHz)	-	4,4				
Dielectric constant (1 MHz)	-	4,2				
Dielectric Dissipation Factor (50 Hz)	-	0,095				
Dielectric Dissipation Factor (1 kHz)	-	0,042				
Dielectric Dissipation Factor (1 MHz)	-	0,004				
Flammability (UL 94)		V-0				
Compression force						
At 10% compression	N / 6.4 cm²	109	130	116	79	57
At 30% compression	N / 6.4 cm²	392	351	240	180	128
At 50% compression	N / 6.4 cm²	752	660	523	442	317

Properties	Unit	Value				
Material thickness	mm	3	3,5	4	4,5	5
Hardness	Shore 00	30				
Thermal conductivity	W/(m·K)	1,4				
Heat flux at 100 kPa	°C·cm²/W	12,4	15	17,1	17,8	18,1
Heat flux at 100 kPa	°C·in²/W	1,92	2,3	2,65	2,75	2,81
Temperature range	°C	−40 to +150				
Dielectric strength	kV/mm	17				
Contact resistance (spec)	Oh·m	2.4×10^{11}				
Dielectric constant (50 Hz)	-	5				
Dielectric constant (1 kHz)	-	4,4				
Dielectric constant (1 MHz)	-	4,2				
Dielectric Dissipation Factor (50 Hz)	-	0,095				
Dielectric Dissipation Factor (1 kHz)	-	0,042				
Dielectric Dissipation Factor (1 MHz)	-	0,004				
Flammability (UL 94)		V-0				
Compression force						
At 10% compression	N / 6.4 cm²	43		32		24
At 30% compression	N / 6.4 cm²	109		87		71
At 50% compression	N / 6.4 cm²	297		216		182

Zeppelinring 18 | D-26197 Ahlhorn | Tel.: +49 (0) 4435 97 10 10 | Fax: +49 (0) 4435 97 10 11
info@mueller-ahlhorn.com | www.mueller-ahlhorn.com | Seat of the company: Ahlhorn
Managing Director: Dr. Michael Müller | AG Oldenburg: HRB 209026 | Ust. ID-Nr.: DE 295969093
St.-Nr.: 68/207/07677 | Certified according to ISO 9001:2015 and ISO 14001:2015
UL recognised repacker E341377

- Production and distribution of electrical insulation materials, thermally conductive products, seals and technical films
- Production of stamped parts, blanks and moulded parts
- Cutting/assembly of films and adhesive tapes
- CNC machining, laser cutting and water jet cutting

Precision components
made of flexible and rigid materials

Thermipad® TP 22823

Trademark information: Thermigrease® is a registered trademark of Dr Dietrich Müller GmbH, Germany.

Please note:

The information in this technical data sheet is based on our current knowledge and experience. Due to the wide range of possible influences during application, it does not exempt the processor and user from carrying out their own tests and trials. A legally binding guarantee of certain properties or suitability for a specific application cannot be derived from our information. Depending on the individual case, we recommend consulting us. The recipient of our products is responsible for observing any industrial property rights and existing laws.

Zeppelinring 18 | D-26197 Ahlhorn | Tel.: +49 (0) 4435 97 10 10 | Fax: +49 (0) 4435 97 10 11
info@mueller-ahlhorn.com | www.mueller-ahlhorn.com | Seat of the company: Ahlhorn
Managing Director: Dr. Michael Müller | AG Oldenburg: HRB 209026 | Ust. ID-Nr.: DE 295969093
St.-Nr.: 68/207/07677 | Certified according to ISO 9001:2015 and ISO 14001:2015
UL recognised repacker E341377

- Production and distribution of electrical insulation materials, thermally conductive products, seals and technical films
- Production of stamped parts, blanks and moulded parts
- Cutting/assembly of films and adhesive tapes
- CNC machining, laser cutting and water jet cutting