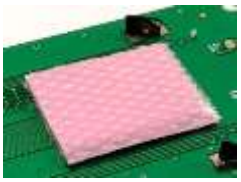
TH832

Ultra Soft Silicone Thermal Pad

Description

TH832 is a pink colour highly filled soft silicone rubber system suitable for used as thermal interface material of electronic devices. This silicone thermal pad is soft and flexible, and yet provides high thermal conductivity, good high temperature resistance and good electrical insulation.



Features

- Low hardness
- High compressible
- Good thermal conductivity
- Electrically insulation
- Easy to assemble

Applications

- Soft silicone rubber based thermal interface pad to dissipate the heat from electronic devices, especially in integrated circuit (IC) device and LEDs packaging.

Cured Properties	Typical Value	Unit	Test Method
Color	Pink	-	PEN 10
Surface tackiness	Natural tack	-	PEN 10
Density	2.25	g/cm^3	ASTM D792
Hardness	60	Shore OO	ASTM D2240
Thermal conductivity	1.5	W/mK	ASTM D5470
Thermal resistance			
a) 100kPa	6.4	$K\text{-}cm^2/W$	ASTM D5470
b) 300kPa	5.9	$K\text{-}cm^2/W$	ASTM D5470
c) 500kPa	5.4	$K\text{-}cm^2/W$	ASTM D5470
Tensile strength	2.2	kgf/cm^2	ASTM D412-98a
Elongation at break	24	%	ASTM D412-98a
Dielectric breakdown voltage	21.0	kV	ASTM D149-09
Dielectric strength	16.4	kV/mm	ASTM D149-09
Volume resistivity	3.4×10^{11}	Ohm-cm	ANSI/ESD STM 11
Flammability, V-0 rating	Pass	-	PEN 55
Operating temperature	-40 to 200	°C	PEN 92
Instant Compression Deflection 10% @ 3mm thickness	11.2	psi	PEN 109
Sustained Compression Deflection 10% (after 30s) @3mm thickness	5.1	psi	PEN 109

* The values above are tested based on batch to batch basis. These values are not used as a basis for preparing specifications.
* PEN is referring to Penchem's standard test method; ASTM is for test reference only.
* Specimen dimension for thermal conductivity measurement – 1.0mm thickness, diameter – 3.3cm, contact pressure at 100kPa.
* Specimen dimension for tensile and elongation at break test –ASTM D412 Type D dumbbell shape
* PEN55 – UL94 as reference test method

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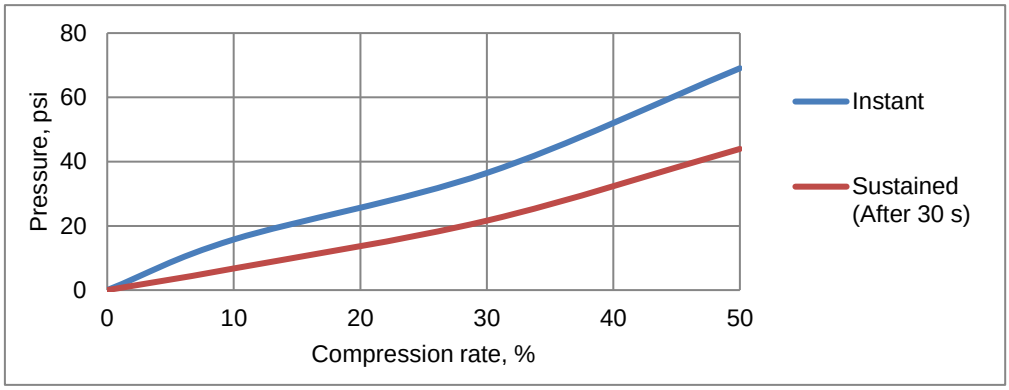
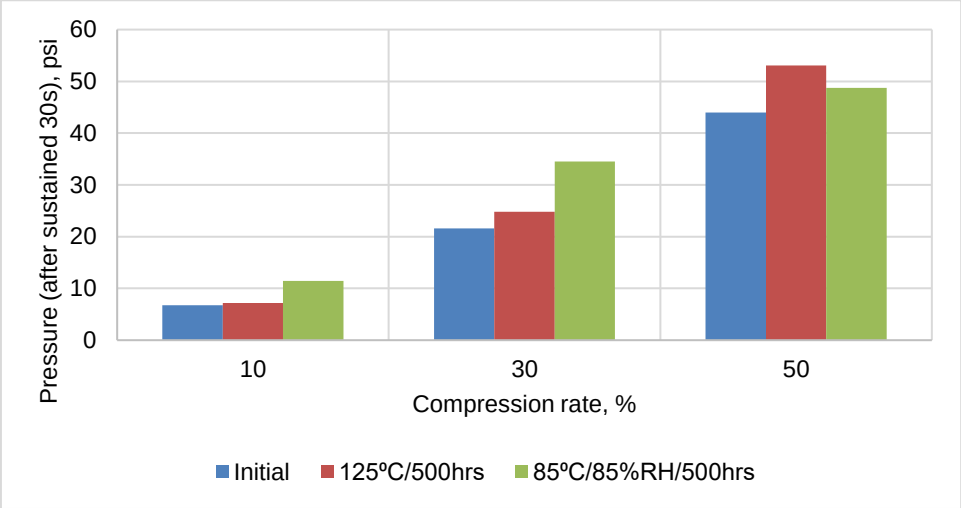
Compression deflection



Compression rate (%)		10	30	50
Initial pressure	psi	15.75	36.45	69.04
Sustained pressure (after 30s)	psi	6.73	21.61	43.95

Remark: Specimen dimension: 25mm x 25mm x 1.0mm

Compression deflection after aging test



Compression rate (%)		10	30	50
Initial	psi	6.73	21.61	43.95
125ºC/500hrs	psi	7.19	24.80	53.08
85ºC/85%RH/500hrs	psi	11.48	34.52	48.73

Remark: Pressure were measured after sustained for 30s. Specimen dimension: 25mm x 25mm x 1.0mm

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Guideline of Use

1. Pick up silicone thermal pad from release film gently.
2. Make sure the surface of the substrate is clean and dried before apply the silicone thermal pad.
3. Position the silicone thermal pad to substrate.
4. Apply some pressure to ensure good contact.
5. The silicone thermal pad can be applied and removed easily (care must be taken during installation to avoid tearing).

Storage & Shelf Life

Tightly close original packaging of unused product and store at room temperature.

Shelf life: 3 years

Packaging

- Will provide customized dimension if required
- Thickness range: 1.0 to 4.0mm

Other product dimension enquiry, please contact our sales department.

Environment, Health & Safety

This product is intended for industrial use only. For more safety information, please refer to Product Safety Data Sheet (SDS).

General Information

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