

### Description

TH994 is a light grey colored, both side tacky silicone based thermal pad, suitable for use as thermal interface material to dissipate the heat from electronic devices, especially in integrated circuit (IC) and LEDs packaging. This thermal pad has low hardness and flexible, and yet provides very high thermal conductivity, good high temperature resistance and good electrical insulation.

### Features

- High thermal conductivity
- Low outgassing
- Flame retardant

### Applications

- Thermal conductive interface material for electronic parts and devices.

Cured Properties	Typical Value	Unit	Test Method
Color	Grey	-	PEN 10
Surface tackiness	Natural tack	-	PEN 10
Density	3.3	g/cm <sup>3</sup>	PEN 14
Hardness	80	Shore OO	ASTM D2240
Thermal conductivity	6.0	W/mK	ASTM D5470
Thermal resistance			
a) 100kPa	1.93	K-cm <sup>2</sup> /W	ASTM D5470
b) 300kPa	1.55	K-cm <sup>2</sup> /W	ASTM D5470
c) 500kPa	1.33	K-cm <sup>2</sup> /W	ASTM D5470
Tensile strength	1.1	kgf/cm <sup>2</sup>	PEN 41
Elongation at break	6.5	%	PEN 41
Breakdown voltage	11.06	kV	PEN 60
Dielectric strength	20.8	kV/mm	PEN 60
Volume resistivity	2.3 x 10 <sup>11</sup>	Ohm-cm	PEN 65
Operating temperature	-40 to 200	°C	PEN 92
Volatile content, 30-150°C	0.08	%	PEN 92
Bleed test, 100°C/100hrs	<1.0	mm	PEN 129
Flammability	V-0	-	PEN 55

\* PEN is referring to Penchem standard test method, ASTM is for Test reference only.

\* The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on certificate of conformance or please contact Penchem representative.

\* Specimen dimension for thermal conductivity and thermal resistance measurement – 1.0mm thickness, diameter – 3.3cm, contact pressure = 100kPa

\* Specimen dimension for tensile and elongation at break test – 10cm length x 1cm width x 0.5mm thick

\* PEN 55 – UL94 as reference test method

Revision 07: 31-Jul-2023

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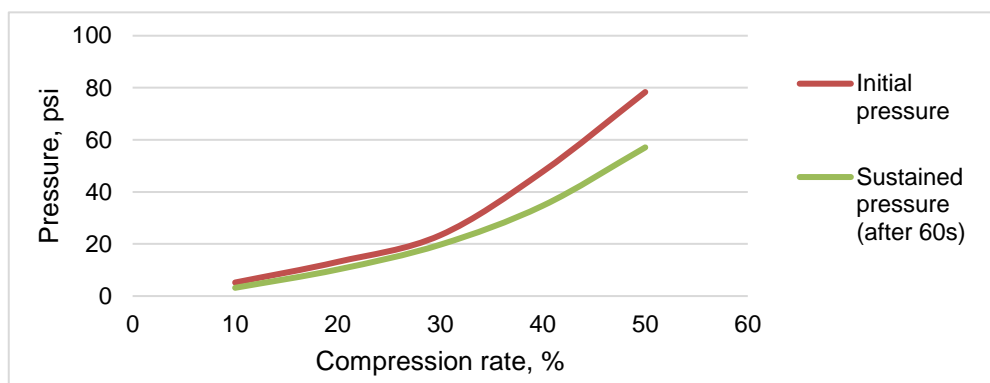
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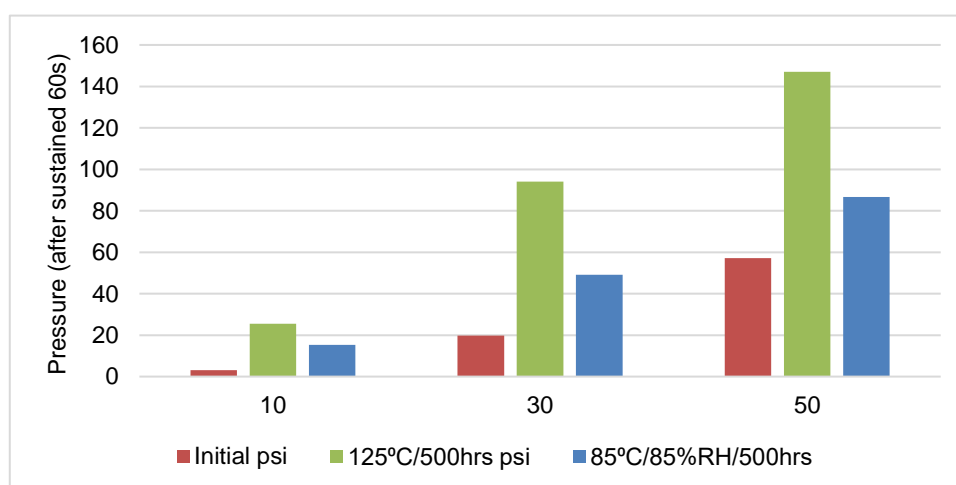
### Compression deflection



Compression rate (%)		10	20	30	40	50
Initial pressure	psi	5.20	13.13	23.36	47.80	78.37
Sustained pressure (after 60s)	psi	3.17	10.20	19.73	34.70	57.10

Remark: Specimen dimension: 25mm x 25mm x 1.5mm

### Compression deflection after aging test



Compression rate (%)		10	30	50
Initial	psi	3.17	19.73	57.10
125°C/500hrs	psi	25.53	94.13	147.07
85°C/85%RH/500hrs	psi	15.23	49.17	86.73

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

### 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. The silicone thermal pad can be applied and removed easily (care must be taken during installation to avoid tearing and contamination).

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### Storage & Shelf Life

Store the silicone thermal pad in a dried place. Avoid prolong exposure to sunlight.

Shelf life: 3 years

### Environment, Health & Safety

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

### Product Dimension

- Thickness range: 0.5 to 2.0mm

Other product dimension enquiry, please contact our sales department.

### General Information

All right reserved. This information in this document is subjected to change without notice.

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