

Data Sheet Compatherm Pads 9612

Compatherm Pad 9612 is an ultra-soft 12 W/mK thermal pad with high conformability and thermal performance. The material is a filled thermally conductive elastomer which provides good thermal performance with great reliability.

Compatherm pad 9612 key properties

- 12 W/(mK) thermal conductivity
- Operating temperature -40 to +150° C
- Electrically insulating material
- Compliant elastomeric based material
- Naturally tacky on both sides, customised surface available
- Available in thickness from 1 to 5mm

* Note: 9612 has random dark colour on cosmetic which is caused by material wear with mixer, it will not affect pad performances.

1. Applications

Compatherm pad 9612 is designed to provide efficient heat transfer for cooling of modern electronics.

2. Typical Product Data

2.1. Thermal Properties

	Test procedure	Unit	9612
Thermal conductivity	ISO 22007-2 (Hot Disk)	W/(mK)	12
	ASTM D5470	W/(mK)	12

2.2. Material properties

	Test procedure	Unit	9612
Base material			Silicone
Colour	Visual		Light Purple
Hardness ¹⁾	ASTM D2240	Shore 00	25
Density	ASTM D792	g/cm ³	2.86
Outgassing, TML ²⁾	ASTM E595 (Modified)	%	0.31
Flammability ³⁾	UL94		V0

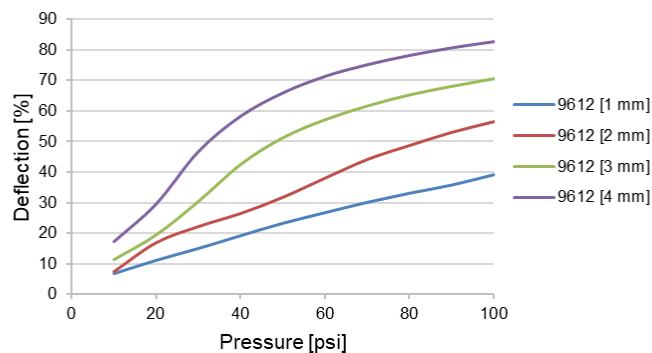
1) Hardness test is performed with 3 seconds delay. 2) Outgassing 24h at 150 °C under ambient pressure. 3) Tested at third-party accredited laboratory & the test report available on request.

2.3. Electrical Properties

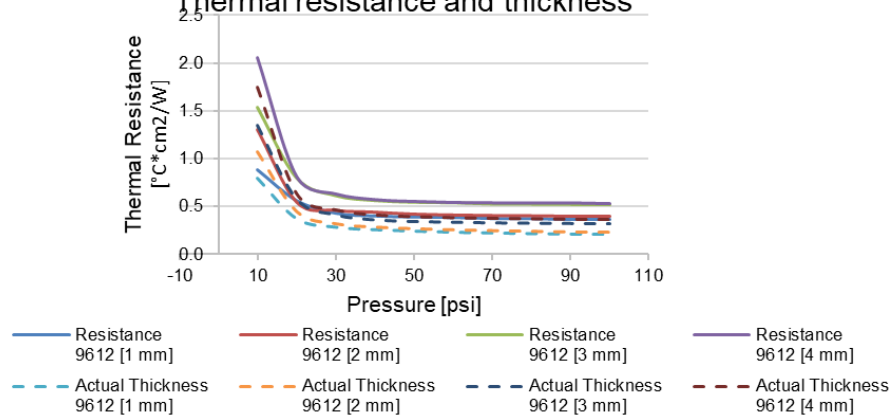
	Test procedure	Unit	9612
Volume resistivity	ASTM D 257	$\Omega \cdot \text{cm}$	1.88×10^{12}
Dielectric constant at 1 MHz	ASTM D 150		11.58
Breakdown voltage	ASTM D 149	VAC/mm	10000

2.4. Pressure dependence of critical properties

Deflection



Thermal resistance and thickness



* Graphs are provided for general reference only. Actual performance will depend on surface properties and other application specific conditions. Engineers are therefore strongly recommended to test materials in conditions realistic to final application.

2.5. Dimensions Tolerances

Thickness tolerances are $\pm 0,1$ mm on pads thinner than 1 mm and $\pm 10\%$ on pads thicker than 1 mm.

XY tolerance is ± 1 mm on standard sizes. The tolerances on custom made pads varies please consult the Nolato marketing department.

2.6. Design Notes

It is recommended to use the material in up to 20%-30% of compression degree. A compression degree of 50% is possible to use but above that level is a thinner pad recommended.

3. Ordering

When ordering Compatherm material please refer to the thermal guide (<https://thermalguide.nolato.com/>) to see the standard products available or consult the Nolato marketing department.

Specialized pads are available in different shape and surface properties. See application note 1 for detailed information on customized surfaces.

4. Storage

The material can be stored one year after production date at 0 to 30°C.

5. RoHS Information

Compatherm pad 9612 fulfils the requirements set by the EU Directive 2011/65 (RoHS).

6. Safety Instructions

Compatherm pad 9612 is not considered as hazardous according to EU Directive 1272/2008 (CLP) and is not subject to the directive of classification, packaging and labelling of dangerous goods. A material safety data sheet can be sent on request.

7. Warranty

The recommendations and data given are based on our experience to date, however, no liability can be assumed in connection with their usage and processing. The typical property data as shown above should not be used as a specification.