Compatherm® Pad 9451 is soft thermal interface material with great thermal performance. Unique filler technology balance product compliancy and high thermal performance, resulting in extremely low thermal resistance. Compatherm® Pad 9451 is naturally tacky on both sides, requiring no adhesive coating to inhibit thermal performance. It can be coated to single side tacky to allow easy material handling and installation.

**FEATURES AND BENEFITS**

- 5 W/mK thermal conductivity
- Electrical isolated
- Nature tacky or no tacky on carrier side
- Available in thickness from 0.5mm to 5mm

**APPLICATIONS**

- Cooling components to chassis, frame, or other mating components
- Memory modules
- Home and small office network equipment
- Mass storage devices
- Automotive electronics
- Telecommunication hardware
- Radios
- LED solid state lighting
- Power electronics
- LCD and PDP flat panel
- Set top boxes

**TYPICAL MATERIAL PROPERTIES**

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST STANDARD</th>
<th>UNIT</th>
<th>9451</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Visual</td>
<td></td>
<td>Grey</td>
</tr>
<tr>
<td>Thickness (^1)</td>
<td>ASTM D374</td>
<td>mm</td>
<td>0.5-5</td>
</tr>
<tr>
<td>Hardness (^2)</td>
<td>ASTM D2240</td>
<td>Shore00</td>
<td>28</td>
</tr>
<tr>
<td>Density</td>
<td>Helium Pyncometer</td>
<td>g/cm(^3)</td>
<td>3.07</td>
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<tr>
<td>Thermal conductivity</td>
<td>Hot Disk</td>
<td>W/mK</td>
<td>5</td>
</tr>
<tr>
<td>Dielectric Breakdown</td>
<td>ASTM D149</td>
<td>VAC</td>
<td>&gt;5000</td>
</tr>
<tr>
<td>Voltage / mm (^3)</td>
<td>ASTM D257</td>
<td></td>
<td>9.5*10(^{14})</td>
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<tr>
<td>Dielectric Constant</td>
<td>ASTM D150</td>
<td></td>
<td>5.27</td>
</tr>
<tr>
<td>@ 1MHZ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outgassing, TML</td>
<td>ASTM E595</td>
<td></td>
<td>0.04%</td>
</tr>
<tr>
<td>Outgassing, CVCM</td>
<td>ASTM E595</td>
<td></td>
<td>0.01%</td>
</tr>
<tr>
<td>Flammability (^4)</td>
<td>UL94</td>
<td></td>
<td>V0</td>
</tr>
</tbody>
</table>

\(^1\) Thickness tolerance, ±10% mm @ nominal thickness greater than 1mm; ± 0.1mm @ nominal thickness less than 1mm.

\(^2\) Thirty second delay

\(^3\) Measured on 1 mm thickness @20 mA

\(^4\) Flame rating valid for 0.25mm thick samples sandwiched between a PCB and an aluminium plate

**Please Note:**

Observed performance may vary in certain circumstances. It is recommended that customers test the material with their specific applications.
**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 a thinner pad is recommended. Excessive compression may result in silicone oil bleeding. It is also recommended to use one and the same compression degree over the whole surface for the same reason.

**ORDERING COMPATHERM®**

Compatherm® materials are typically cut into custom shapes based on the application requirements. Modus stocks the full line of materials and can provide cut piece and kit prices based on your unique application. Cut pieces can be delivered kiss cut to a liner or through cut.
CUSTOMERS WHO USE COMPATHERM® MAY ALSO BE INTERESTED IN:

EMI SHIELDING

THE NOLATO GROUP

Nolato is an advanced high-tech polymer partner with operations in Europe, Asia and North America. We develop and manufacture products in materials such as plastic, silicone and TPE. Our customer offering comprises everything from concept development, product design and process optimization to high-volume production, post-processing, assembly and logistics.

STORAGE CONDITIONS

- The material can be stored one year after receipt at normal room temperature and humidity.

APPLICATION PROCEDURE

- Remove the top PET liner from the top surface of the sheet.
- With fingers remove the die cut part from the bottom PET liner.
- Place the part in the desired surface of heat sink, heat spreader of component.
- The stickiness of the material will assure that it adheres to the surface without need of high pressure.
- Do not press the part too hard when applying it to assure that height of the material is not destroyed.
- Once applied, it is not recommended to remove and re-use the Compatherm part as it has low material stability.
- If needed, peel off the part from the surface by hand and replace it with a new one.

REPAIR PROCEDURE

- At room temperature slide or pull or twist the heatsink to separate it from the PCB.
- After separation, remove both surfaces with a plastic tool to remove the bulk of material.
- Clean both surfaces with tissue wiper.
- Apply a new Compatherm part.

CUSTOMERS ALSO SEARCHED:

gap filler
thermal material
thermal interface materials
thermal putty
thermal conductive pad
gap filler
thermal gap pad
thermal gap filler
thermal interface pad
thermal materials
thermal silicone

heat transfer pad
thermal interface pad
thermally conductive pad
silicone gap filler
conductive pads
thermal pad material
silicone thermal pad
thermally conductive rubber
thermal conductive pads
what is a thermal pad

ABOUT MODUS

We are Modus! With multiple locations in North America and China, Modus Advanced, Inc. is a diversified custom manufacturer that converts EMI Shielding, Environmental Gasket Materials, Microwave Absorbers, Acoustic Materials, Thermal Interface Materials and other high performance materials into finished parts. Modus utilizes its 40 years as an established provider of high quality, reliable products to create precisely what customers specify. Innovative processes; custom fabrication utilizing performance materials; an on time delivery record of more than 99% means Modus is well positioned to help your company succeed.

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