

## Thermally Conductive Insulator EU-INSK52-2



**EU-INSK52-2** consists of Dupont Kapton polyimide film, precoated on both sides with thermally conductive Phase Change Material. The material is dry to the touch and flexible at room temperature. When placed between two rigid, rough, uneven surfaces and heat (>52°C) and pressure (4.5psi) are applied the following occurs:

- 1) When the heat exceeds 52°C (either from electronic component heat-up or because of externally applied heat) the PCM (Phase Change Material) becomes a soft, thixotropic consistency;
- 2) The physical pressure on the component causes the PCM to flow into the micropores of the component and heat sink, expelling air from these pores.
- 3) The Kapton provides an excellent electrical insulation.

### SPECIFIC PRODUCT CHARACTERISTICS:

Features&Benefits	Configurations	Typical application
<ul style="list-style-type: none"> <li>• High dielectric strength of &gt; 6000VAC</li> <li>• Resistant to tears and punctures</li> <li>• Low thermal resistance</li> <li>• Low mounting force</li> </ul>	<ul style="list-style-type: none"> <li>• Sheet 300x300mm</li> <li>• Roll 300mmx90m</li> <li>• Die cut parts</li> </ul>	<ul style="list-style-type: none"> <li>• Audio amps</li> <li>• Switching mode power supplies</li> <li>• Power modules</li> <li>• General high pressure interface</li> </ul>

**PRODUCT PROPERTIES:**

Properties	EU-INSK52-2	Unit	Test Method
Colour	Amber	-	Visual
Substrate Material	MT Polyimide	-	-
Substrate Thickness	0,051	mm	-
Total Thickness	0,076	mm	-
Tensile strength	18	kpsi	ASTM D412
Operating Temperature Range	-60 up to 150	° C	-
Dielectric with Stand Voltage	6000	VAC	ASTM D149
Dielectric Breakdown Voltage	7800	Volts AC	ASTM D149
Volume resistivity	$4 \times 10^{14}$	Ohm-cm	ASTM D257
Dielectric constant @ 1 MHz	1.8		ASTM D257

**TOTAL THERMAL RESISTANCE:**

Pressure, psi	Units	10	20	50	100	200	400
ASTM D5470 mod.	°C-in <sup>2</sup> / watt	0,23	0,23	0,22	0,22	0,22	0,22
ASTM D5470 mod.	°C-cm <sup>2</sup> / watt	1,48	1,48	1,42	1,42	1,42	1,42

**CUSTOMIZATIONS:**

Cut to length	Water Jet Cut	Plotter Cut
		

Our customer are reminded that they bear the responsibility for testing Euro Technologies, Srl materials for their proposed use. Due to various application possibilities and conditions which are beyond our control, customers should carry out their own tests to determine the suitability for individual applications.

We reserve the right to change technical specifications without notice and take no responsibility for errors and misprints.