

# THERMAL PADS 1150

Thermal interface materials (TIMs) are designed to fill in air gaps and microscopic irregularities



Thermal interface material is used to fill the gaps between thermal transfer surfaces such as between microprocessors and heat sinks, in order to increase the efficiency of thermal transfer. There is usually air in these gaps, and air is a notoriously poor conductor. The interface material is easy to handle and is not messy. It is available in solid and liquid form and comes in various thicknesses.

## THERMAL CONDUCTIVITY

The thermal conductivity of the interface material determines its thermal performance to a large extent. The high thermal conductivity of this product guarantees sufficient heat transfer, resulting in a better cooling solution and the desired heat dissipation.

This film, with its excellent thermal and electrical properties, is especially suitable for high-power applications. The material performs so well that it can be used reliably in densely packed electronic applications.

## PROPERTIES

- Good insulation properties
- Heat conducting
- Good compressibility
- Flexible
- Environmentally friendly

## APPLICATIONS

- RD-RAM memory chips
- Heat pipe thermal solutions
- automotive engines
- control units
- plasma supply panels

## BENEFITS

- Temperatures up to 200 °C
- High insulation properties
- Supplied as sheets, strips or die-cuts
- Thicknesses of 0.5 to 5 mm (see table below)

| Part number              | Color              | Thermal resistance K/W | Thermal impedance °Cmm²/W | Thermal conductivity W/mK | Breakdown voltage KV | Dielectric breakdown Ed; ac KV/mm | Volume resistivity Ωm  | Dielectric loss factor tan δ | Dielectric constant εr | Hardness Shore 00 | Young's modulus N/cm² | Application temperature °C | Density | Available thickness mm                           |
|--------------------------|--------------------|------------------------|---------------------------|---------------------------|----------------------|-----------------------------------|------------------------|------------------------------|------------------------|-------------------|-----------------------|----------------------------|---------|--|
| 1150-125                 | Dark orange        | 0.8                    | 322<br>0.5                | 1.5                       | 6.0                  | 12.0                              | 6.1 x 10 <sup>10</sup> | 1.5 x 10 <sup>-1</sup>       | 4.3                    | 10- 25            | 24                    | -40 to +180                | 2.0     | 0.5, 1.0, 1.5, 2.0, 3.0, 4.0, 5.0                |
| 1150-128                 | Pink / dark orange | 0.8                    | 322<br>0.5                | 1.5                       | 6.0                  | 12.0                              | 1.8 x 10 <sup>12</sup> | 1.0 x 10 <sup>-3</sup>       | 2.3                    | 10- 25            | 67                    | -40 to +180                | 1.9     | 0.5, 2.5, 4.5                                    |
| 1150-200                 | Pink/yellow        | 1.2                    | 480<br>0.75               | 1.0                       | 8.0                  | 16.0                              | 1.0 x 10 <sup>11</sup> | 1.5 x 10 <sup>-3</sup>       | 3.9                    | 10- 20            | 22                    | -60 to +200                | 1.61    | 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0 |
| 1150-225                 | Orange             | 0.6                    | 240<br>0.37               | 2.0                       | 6.0                  | 12.0                              | 2.2 x 10 <sup>11</sup> | 1.0 x 10 <sup>-3</sup>       | 3.6                    | 30- 45            | 58                    | -40 to +180                | 1.65    | 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0           |
| 1150-228                 | Pink / orange      | 0.6                    | 240<br>0.37               | 2.0                       | 6.0                  | 12.0                              | 2.8 x 10 <sup>11</sup> | 1.0 x 10 <sup>-3</sup>       | 2.5                    | 30- 45            | 160                   | -40 to +180                | 1.95    | 0.5, 1.0   |
| 1150-235                 | Yellow             | 0.6                    | 240<br>0.37               | 2.0                       | 6.0                  | 12.0                              | 1.7 x 10 <sup>11</sup> | 2.0 x 10 <sup>-2</sup>       | 3.7                    | 25- 40            | 32                    | -40 to +200                | 1.65    | 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0           |
| 1150-238                 | Pink / yellow      | 0.6                    | 240<br>0.37               | 2.0                       | 6.0                  | 12.0                              | 4.7 x 10 <sup>11</sup> | 1.0 x 10 <sup>-3</sup>       | 1.9                    | 25- 40            | 122                   | -40 to +200                | 1.65    | 0.5, 1.0, 2.0, 3.0, 4.5                          |
| 1150-320                 | Yellow             | 0.5                    | 147<br>0.23               | 2.5                       | 5.0                  | 10.0                              | 6.8 x 10 <sup>11</sup> | 2.9 x 10 <sup>-2</sup>       | 3.4                    | 25- 38            | 32                    | -40 to +180                | 1.69    | 1.0, 1.5, 2.0, 3.0, 4.0, 4.5                     |
| 1150-450                 | Brown              | 0.27                   | 108<br>0.18               | 4.5                       | 5.0                  | 10.0                              | 3.6 x 10 <sup>12</sup> | 3.0 x 10 <sup>-3</sup>       | 2.5                    | 65- 75            | 95                    | -40 to +180                | 1.32    | 0.5, 1.0   |
| 1150-500                 | Brown              | 0.25                   | 100<br>0.15               | 5.0                       | 1.0                  | 2.0                               | 1.0 x 10 <sup>11</sup> | 1.5 x 10 <sup>-3</sup>       | 3.9                    | 65- 75            | 70                    | -60 to +200                | 1.33    | 0.5, 1.0, 1.5, 2.0                               |
| 1150-525                 | Violet             | 0.22                   | 89<br>0.14                | 5.5                       | 1.25                 | 2.5                               | 1.6 x 10 <sup>13</sup> | 1.0 x 10 <sup>-3</sup>       | 2.7                    | 50- 65            | 99                    | -40 to +180                | 1.18    | 0.5, 1.0, 1.5, 2.0, 2.5, 3.0                     |
| 1150-550                 | Light grey         | -                      | 0.22                      | 6.0                       | >5.0                 | 15.5                              | 6.0 x 10 <sup>13</sup> | -                            | -                      | 55-65             | -                     | -58 to +200                | -       | 0.5, 1.0, 1.5, 2.0, 2.5                          |
| 1150-600                 | Grey               | 0.2                    | 80<br>0.12                | 6.0                       | 1.5                  | 3.0                               | 1.7 x 10 <sup>10</sup> | 2.0 x 10 <sup>-3</sup>       | 2.5                    | 60- 75            | 77                    | -60 to +180                | 1.28    | 0.5, 1, 1.5                                      |
| 1150-U110 (silicon free) | Brown              | 1.2                    | -                         | 2.0                       | -                    | 8.0                               | -                      | -                            | -                      | 60-75             | -                     | -40 to +110                | 1.87    | 0.5, 2.0   |