

## Thermal Gap Filler

Thermal Gap Filler is composed of ceramic oxide thermal conductivity powder and organic elastic silicon adhesive, which is an excellent thermal conductivity composite filling material with low compression force, low thermal resistance, super soft performance and rebound resilience, also easy to operate and die cutting, It has high thermal performance and excellent thermal reliability.

It can also achieve low interfacial thermal resistance under relatively low pressure. that can effectively eliminate air and achieve good filling effect Thermal silicon film has good insulation resistance to pressure and flame retardant properties, which make it safe and reliable for application.

### STORAGE AND SHELF LIFE

Storage period: 18 months; under normal temperature, cool and dry location, temperature:  $15^{\circ}\text{C} < T < 30^{\circ}\text{C}$ , relative humidity:  $\text{RH} < 60\%$ .

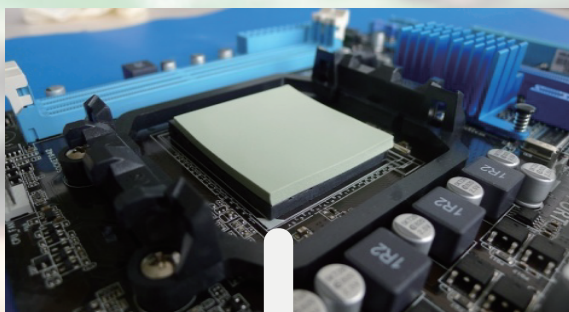
Furtherma® FTA6000 Series thermal Gap Filler can be die cut to individual shapes.

a) The product is naturally tacky on both sides. These can be provided tacky on one side only. This is indicated by the suffix "D". This option offers good separation properties allowing the tacky side to stick to the heatsink/chassis /cold plate/etc. and the other "dry" side to release easily from the component(s).

b) The product is naturally gray color, and can be customized to color black(by the suffix "B") or color white(by the suffix "W") and other colors(by the suffix "S")

c) Pressure sensitive adhesive on one side for better adhesion( by the suffix "A")

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.



[www.longyoung.com](http://www.longyoung.com)

## Features and advantage

- Low permeability oil rate
- Excellent temperature resistance
- High compressibility, super soft material
- 6 W/m-K thermal conductivity
- Available in thickness from 0.020" -0.200" (0.5mm - 5.0mm)
- Bilateral auto adhering, as well as lateral adhering
- Outstanding electrical insulation performance

## Application

- Communication equipment, network terminal
- Automotive/consumer electronics
- LED, data transmission
- Medical devices, military, aerospace

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# furtherma

## FTA6000 Series Thermal Gap Filler

| ITEM                                  | FTA6005              | FTA6010              | FTA6015              | FTA6020              | FTA6025              | FTA6030              | FTA6040              | FTA6050              | TEST METHOD    |
|---------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------|
| Thickness [mm]                        | 0.50                 | 1.00                 | 1.50                 | 2.00                 | 2.5                  | 3.0                  | 4.0                  | 5.0                  | ASTM D374      |
| Conductivity [W/m·K] <sup>①</sup>     | 6±10%                | 6±10%                | 6±10%                | 6±10%                | 6±10%                | 6±10%                | 6±10%                | 6±10%                | ASTM D5470     |
| T-tolerance [mm]                      | 0.5±0.05             | 1.0±0.1              | 1.5±0.15             | 2.0±0.2              | 2.5±0.25             | 3.0±0.3              | 4.0±0.4              | 5.0±0.5              | ASTM D374      |
| Density [g/cm <sup>3</sup> ]          | 3.3±0.2              | 3.3±0.2              | 3.3±0.2              | 3.3±0.2              | 3.3±0.2              | 3.3±0.2              | 3.3±0.2              | 3.3±0.2              | ASTM D792      |
| Hardness [Shore 00]                   | 60                   | 60                   | 60                   | 60                   | 60                   | 60                   | 60                   | 60                   | ASTM D2240     |
| Tensile Strength[psi]                 | 20                   | 20                   | 20                   | 20                   | 20                   | 20                   | 20                   | 20                   | ASTM D412      |
| Elongation [ % ]                      | 25                   | 25                   | 25                   | 25                   | 25                   | 25                   | 25                   | 25                   | ASTM D412      |
| UL flammability rating                | V0                   | V0                   | V0                   | V0                   | V0                   | V0                   | V0                   | V0                   | UL 94          |
| Temperature range [°C]                | -40 ~ 150            | -40 ~ 150            | -40 ~ 150            | -40 ~ 150            | -40 ~ 150            | -40 ~ 150            | -40 ~ 150            | -40 ~ 150            | /              |
| Thermal impedance <sup>②</sup> @10psi | 0.18                 | 0.26                 | 0.35                 | 0.48                 | 0.55                 | 0.69                 | 0.78                 | 0.92                 | ASTM D5470     |
| Thermal impedance <sup>②</sup> @69KPa | 1.16                 | 1.7                  | 2.27                 | 3.11                 | 3.54                 | 4.47                 | 5.06                 | 5.91                 | ASTM D5470     |
| Thermal Expansion [ppm/°C]            | 140                  | 70                   | 70                   | 70                   | 70                   | 70                   | 70                   | 70                   | IPC-TM-650 2.4 |
| Breakdown Voltage [KV/mm]             | > 5                  | > 6                  | > 6                  | > 6                  | > 6                  | > 6                  | > 6                  | > 6                  | ASTM D149      |
| Volume resistivity [Ω ·cm]            | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | 1.0*10 <sup>13</sup> | ASTM D257      |
| Dielectric Constant @1MHz             | 6.4                  | 6.4                  | 6.4                  | 6.4                  | 6.4                  | 6.4                  | 6.4                  | 6.4                  | ASTM D150      |

① Need other specification for your project? please feel free to contact us. ② Unit: °C - in<sup>2</sup>/W ③ Unit: °C -cm<sup>2</sup>/W