



# TG4040

## Ultra-Soft Thermal Conductive Pad

Version 2.130218

### Ultra-Soft Thermal Conductive Pad

TG4040 is an ultra-soft, silicone based thermal interface material. TG4040 has a low thermal impedance, conforms readily to surfaces due to its low hardness and provides a high dielectric breakdown voltage. TG4040 can be provided in various thicknesses and formats, such as custom die cuts, standard sheets or log rolls depending on the end application.

### Features

Solve the problems with thermal conduction, electrical isolation and buffering  
 High thermal conduction, low thermal resistance, and high compressibility  
 Increase the performance of electronics  
 Low oil bleed

### Applications

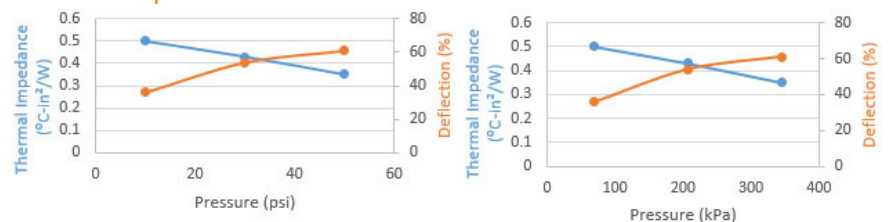
High Power Applications  
 Electronic components: IC, CPU, MOS  
 LED, M/B, P/S, Heat Sink  
 LCD, TV, Notebook PC, PC Telecom Device, Wireless Hub, etc.  
 DDR II Module, DVD Applications, Hand-set applications, etc.

### Properties

- ✓ REACH Compliant
- ✓ ROHS Compliant

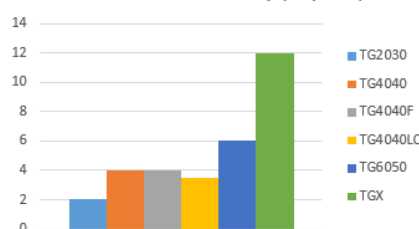
| Property  | TG4040            | Unit                | Tolerance | Test Method |
|---|-------------------|---------------------|-----------|-------------|
| Colour  | Blue              | -                   | -         | Visual      |
| Thickness   | 0.5 - 5.0         | mm                  | -         | ASTM D374   |
|   | 0.0197 - 0.1969   | inch                | -         | ASTM D374   |
| Thermal Conductivity  | 4                 | W/mK                | ±0.4      | ASTM D5470  |
| Flammability Rating   | V-0               | -                   | -         | UL 94       |
| Dielectric Breakdown Voltage                                    | 15                | kV/mm               | ±1.5      | ASTM D149   |
| Weight Loss   | <1                | %                   | -         | ASTM E595   |
| Density   | 2.8               | g/cm <sup>3</sup>   | ±0.2      | ASTM D792   |
| Working Temperature   | -45 to 200        | °C                  | -         | -           |
| Volume Resistance   | >10 <sup>12</sup> | Ohm-cm              | -         | ASTM D257   |
| Elongation  | 100               | %                   | -         | ASTM D412   |
| Tensile Strength  | 1                 | Kgf/cm <sup>2</sup> | -         | ASTM D412   |
| Hardness  | 35                | Shore 00            | ±10       | ASTM D2240  |
| Shelf Life  | 36                | months              | -         | -           |
| Shelf Life with adhesive<br>(can be requalified for further 12) | 12                | months              | -         | -           |

### Thermal Impedance vs Pressure vs Deflection

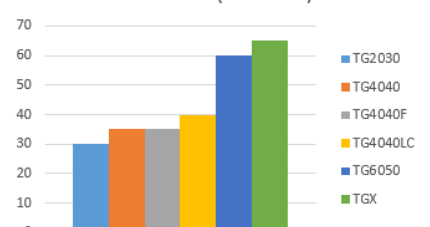


### Data

Thermal Conductivity (W / mK)



Hardness (Shore 00)



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# TG4040

## Ultra-Soft Thermal Conductive Pad

### Standard Weights & Dimensional Tolerance

| Size    | Thickness (mm) | 0.50   | 0.80   | 1.00   | 1.50   | 2.00   | 2.50   | 3.00     | 3.50     | 4.00     | 4.50     | 5.00   |
|---------|----------------|--------|--------|--------|--------|--------|--------|----------|----------|----------|----------|--------|
|         | 100x100        | 14.00  | 22.40  | 28.00  | 42.00  | 56.00  | 70.00  | 84.00    | 98.00    | 112.00   | 126.00   | 140.00 |
| 150x150 | 31.50          | 50.40  | 63.00  | 94.50  | 126.00 | 157.50 | 189.00 | 220.50   | 252.00   | 283.50   | 315.00   |        |
| 300x300 | 126.00         | 201.60 | 252.00 | 378.00 | 504.00 | 630.00 | 756.00 | 882.00   | 1,008.00 | 1,134.00 | 1,260.00 |        |
| 320x320 | 143.36         | 229.38 | 286.72 | 430.08 | 573.44 | 716.80 | 860.16 | 1,003.52 | 1,146.88 | 1,290.24 | 1,433.60 |        |

\* All sizes are in mm

| Die-Cut Thickness Tolerances | Thickness (mm) | Tolerance (mm) |
|------------------------------|----------------|----------------|
|                              | 0.3            | ±0.03          |
|                              | 0.5            | ±0.05          |
|                              | 0.8            | ±0.08          |
|                              | 1.0            | ±0.1           |
|                              | 1.2            | ±0.12          |
|                              | 1.5            | ±0.15          |
|                              | 2.0            | ±0.2           |
|                              | 2.5 - 3.5      | ±0.25          |
|                              | 4.0 - 4.5      | ±0.3           |
|                              | 5.0            | ±0.35          |
|                              | 6.0 - 8.0      | ±0.4           |
|                              | 9.0            | ±0.45          |
| 10.0                         | ±0.5           |                |
| >10.0                        | ±0.5           |                |

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

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