



# Dow Corning® TC-5022 Thermally Conductive Compound

Non-curing, thermally conductive compound

## Material Properties

Property	Dow Corning® TC-5022 Thermally Conductive Compound
Description	Non-curing, thermally conductive compound
Form	Non-curing compound
Viscosity average	89,160 Centipoise at 1 rpm
Specific gravity	3.2
Non-volatile content at 120°C	99.9%
Volatile content at 120°C	< 0.05%
Color	Gray
Thermal resistance (ASTM D5470) @ 20 µm under 40 psi	0.061°C-cm <sup>2</sup> /W
Thermal conductivity	4.0 W/m-K
Volume resistivity	5.5 x 10 <sup>10</sup> ohm-cm
Dielectric strength	115 volts/mil
Dielectric constant at 1 kHz	18
Dielectric dissipation factor at 1 kHz	0.13
Container size	1 kg tub
Mix ratio	1-part (no mixing)
Shelf life	24 months from date of manufacture

### Description

Dow Corning® TC-5022 Thermally Conductive Compound is a high-quality material for mid- to high-end applications. TC-5022 is formulated with an advanced silicone fluid that interacts with thermally conductive filler particles to form a highly stable matrix that helps to prevent pump-out and other common failure mechanisms. The high thermal conductivity of TC-5022 makes it ideal for a variety of applications where heat must be dissipated across varying bond line widths.

### Key Characteristics

- Thermal conductivity: 4.0 W/m-K
- Excellent thermal performance
- Pump-out resistant
- Achieves thin bond lines, independent of pressure
- High stability and reliability

### Potential Uses

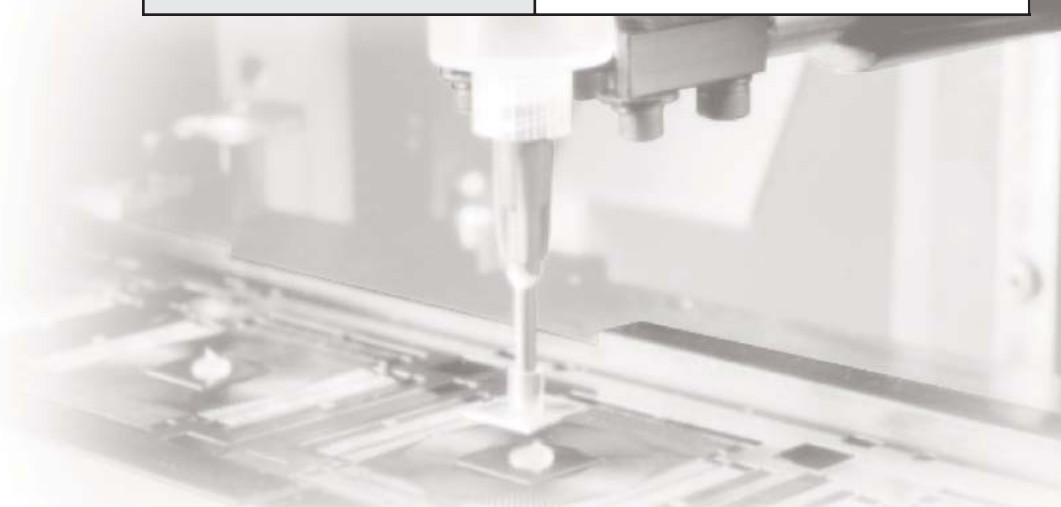
Thermal interface material for a variety of medium- to high-power devices in electronics and other industrial applications

### Applications

- Microprocessors
- Flip-chip BGAs
- LED assemblies
- A variety of other high-end devices

### Application Methods

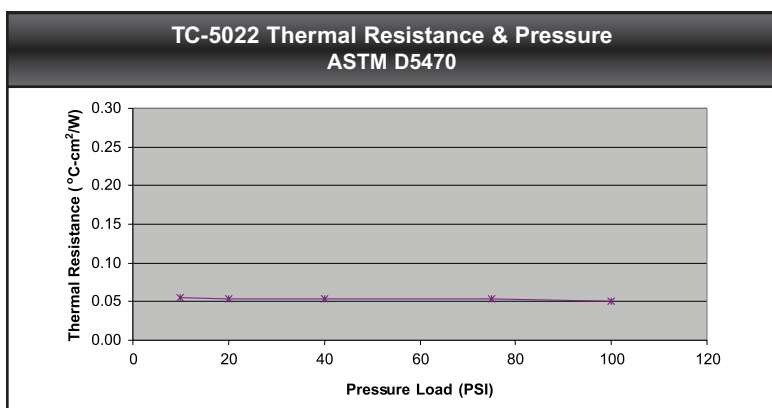
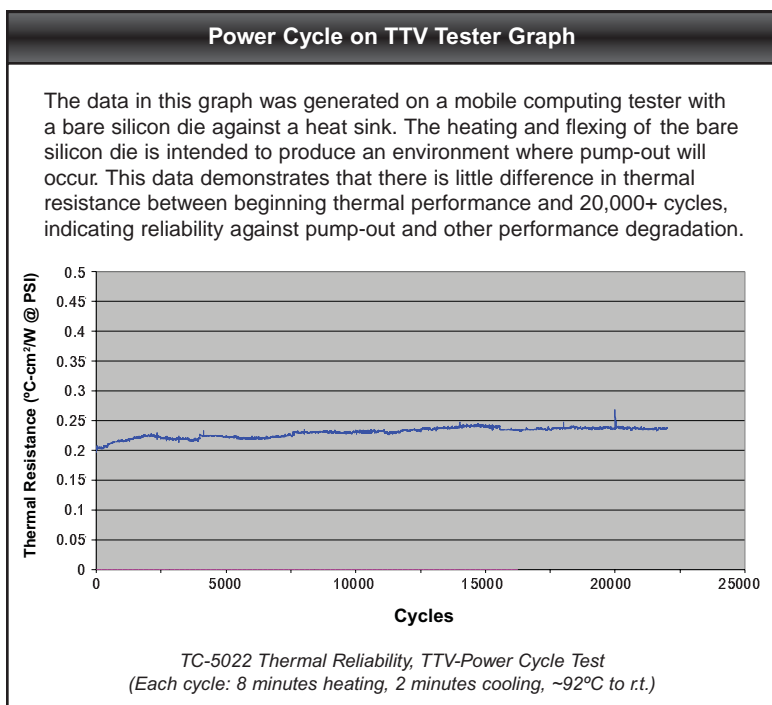
- Screen print
- Stencil print
- Dispense



## Important Features and Benefits

Features	Benefits
Excellent thermal conductivity; low thermal resistance	<ul style="list-style-type: none"> <li>Improved thermal performance</li> </ul>
Advanced silicone fluid interacts with filler particles to create a more stable matrix	<ul style="list-style-type: none"> <li>Resists pump-out</li> <li>Great stability &amp; reliability</li> </ul>

## Performance Data



## Need Additional Help?

Dow Corning offers a broad range of thermal products and solutions to meet your current and emerging needs.

For additional information on the complete line of *Dow Corning*® brand thermal management products, please call your local sales office, see [www.dowcorning.com/electronics](http://www.dowcorning.com/electronics), or e-mail [electronics@dowcorning.com](mailto:electronics@dowcorning.com).

## Your Global Connection

### Asia

Dow Corning Toray Silicone Co., Ltd. – Japan  
Tel: +81 3 3287 1011 (Tokyo Office)  
Dow Corning Korea Ltd. – Seoul  
Tel: +82 2 551 7600  
Dow Corning Taiwan Inc. – Taipei  
Tel: +886 2 6600 3100  
Dow Corning China – Shanghai  
Tel: +86 21 2306 5500  
Dow Corning – Malaysia  
Tel: +60 3 5032 2128  
Dow Corning Asia – Singapore  
Tel: +65 6359 3331  
Dow Corning (Thailand) Ltd. – Thailand  
Tel: +65 6359 3331

### Europe

Dow Corning S.A.  
Tel: +32 64 888 000

### North America

Dow Corning Corporation  
World Headquarters  
Tel: +1 989 496 6000

### South America

Dow Corning Do Brasil Limitada  
Tel: +55 11 3759 4300

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