

## Product Information

# Thermal Interface Wet Dispensed



## Dow Corning® TC-5625 Thermally Conductive Compound

Gray, flowable non-curing thermally conductive compound

### FEATURES

- Flowable
- Outstanding thermal conductivity

### BENEFITS

- No need for ovens or curing
- Heat flow away from electronic components can increase reliability

### POTENTIAL USES

- Thermal management material for LED devices

### APPLICATION METHODS

- Screen print
- Stencil print
- Dispense

### TYPICAL PROPERTIES

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Viscosity	cP	102125
	mPa-sec	102125
	Pa-sec	102.1
Specific Gravity (Uncured)	-	4.2
NVC (Non Volatile Content)	%	99.93
Thermal Conductivity	btu/hr ft degF	4.325
	W/mK	2.5
Thermal Resistance @ 25N/cm <sup>2</sup>	°C*cm <sup>2</sup> /W	0.1
Bond Line Thickness	inch	0.01
	mm	0.03
Dielectric Strength	volts/mil	75
	kV/mm	3
Volume Resistivity	ohm*cm	1.22E12
Dissipation Factor @ 1kHz	-	0.0415
Dielectric Constant @ 1kHz	-	19.61

### DESCRIPTION

Dow Corning thermally conductive compounds are greaselike silicone materials, heavily filled with heat-conductive metal oxides. This combination promotes high thermal conductivity, low bleed and high-temperature stability. The compounds resist changes in consistency at temperatures up to 177°C (350°F),

maintaining a positive heat sink seal to improve heat transfer from the electrical/electronic device to the heat sink or chassis, thereby increasing the overall efficiency of the device. Long-term, reliable protection of sensitive circuits and components is important in many of today's delicate and demanding electronic applications. With the increase in

processing power and the trend toward smaller, more compact electronic modules, the need for thermal management is growing. Thermally conductive silicones function as heat transfer media, durable dielectric insulation, barriers against environmental contaminants and as stress-relieving shock and vibration absorbers over a wide

temperature and humidity range. In addition to sustaining their physical and electrical properties over a broad range of operating conditions, silicones are resistant to ozone and ultraviolet degradation and have good chemical stability. Good heat transfer is dependent on a good interface between the heat producing device and the heat transfer media. Silicones have a low surface tension that enables them to wet most surfaces, which can lower the thermal contact resistance between the substrate and the material.

### **SOLVENT EXPOSURE**

Although highly filled silicones such as those discussed in this data sheet are generally more resistant to solvent or fuel exposure, standard silicones are intended only to survive splash or intermittent exposures. Testing should be done to confirm performance of the adhesives in the application and under the specified environmental conditions.

### **STORAGE AND SHELF LIFE**

Shelf life is indicated by the "Use By" date found on the product label. For best results, Dow Corning thermally conductive materials should be stored at or below the maximum specified storage temperature. Special precautions must be taken to prevent moisture from contacting these materials. Containers should be kept tightly closed and head or air space minimized. Partially filled containers should be purged with dry air or other gases, such as nitrogen. Any special storage and handling instructions will be printed on the product containers.

### **HEALTH AND ENVIRONMENTAL INFORMATION**

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area. For further information, please see our website, [www.dowcorning.com](http://www.dowcorning.com), or consult your local Dow Corning representative.

### **LIMITATIONS**

These products are neither tested nor represented as suitable for medical or pharmaceutical uses.

### **LIMITED WARRANTY INFORMATION PLEASE READ CAREFULLY**

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### **For More Information**

To learn more about these and other products available from Dow Corning, please visit the Dow Corning Electronics website at [www.dowcorning.com/electronics](http://www.dowcorning.com/electronics).



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