



Technical Data Sheet

DOWSIL™ TC-5629 TC Compound

FEATURES & BENEFITS

- High thermal conductivity
- Good stability on vertical surfaces
- Thermally conductive solution for LED lightings and other PCB system assembly applications
- Vertical gap-fill capability up to 1.0 mm

COMPOSITION

- Thermally conductive fillers
- Siloxane polymer matrix

One-part grey, and non-curing thermally conductive compound

APPLICATIONS

- DOWSIL™ TC-5629 TC Compound is an excellent thermally conductive solution for LED lightings and other electronics applications.

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
One part or Two part	-	One
Color	-	Grey
Viscosity	Pa s	295
Thixotropy	NA	2
Specific Gravity (uncured)	NA	3.1
Thermal Conductivity	btu/hr-ft-°F	1.9
	W/mK	3.2
Dielectric Strength	volts/mil	160
	kV/mm	6.3
Volume Resistivity	ohm*cm	3.1E+13

DESCRIPTION

Dow thermally conductive compounds are grease like silicone materials, heavily filled with heat-conductive metal oxides. This combination promotes high thermal conductivity, low bleed and high-temperature stability. The compounds are designed to maintain a positive heat sink seal to improve heat transfer from the electrical device and PCB system assembly to the heat sink or chassis, thereby increasing the overall efficiency of the device. Electronic devices are continually designed to deliver higher performance.

Especially in the area of consumer devices, there is also a continual trend towards smaller, more compact designs. In combination these factors typically mean that more heat is generated in the device. Thermal management of PCB system assembly is a primary concern of design engineers. A cooler device allows for more efficient operation and better reliability over the life of the device. As such, thermally conductive compounds play an integral role here. Thermally conductive materials act as a thermal “bridge” to remove heat from a heat source (device) to the ambient via a heat transfer media (i.e. heat sink).

These materials have properties such as low thermal resistance, high thermal conductivity, and can achieve thin Bond Line Thicknesses (BLTs) which can help to improve the transfer of heat away from the device.

APPLICATION METHODS

- Automated or manual dispensing

SOLVENT EXPOSURE

In general, the product is resistance to minimal or intermittent solvent exposure, however best practice is to avoid solvent exposure altogether.

USABLE LIFE AND STORAGE

The product should be stored in its original packaging with the cover tightly attached to avoid any contamination. Store in accordance with any special instructions listed on the product label. The product should be used by the indicated Exp. Date found on the label.

HANDLING

PRECAUTIONS

PRODUCT SAFETY

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LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

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