

# Dow Corning<sup>®</sup> TC-5351 Thermally Conductive Compound

## FEATURES & BENEFITS

- High thermal conductivity
- Good stability on vertical surfaces
- Thermally conductive solution for automotive 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

- *Dow Corning*<sup>®</sup> TC-5351 Thermally Conductive Compound is suitable for use as a thermally conductive material in power electronics.

## TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Result
One part or Two part	-	One
Color	-	Grey
Viscosity	cP	300000
	mPa-sec	300000
	Pa-sec	300
Thixotropy	NA	2
Specific Gravity (uncured)	NA	3.1
Thermal Conductivity	btu/hr-ft-°F	1.9
	W/mK	3.3
Dielectric Strength	volts/mil	160
	kV/mm	6.3
Volume Resistivity	ohm*cm	3.1E+13

## DESCRIPTION

*Dow Corning*<sup>®</sup> brand 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/electronic device 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 electronics, 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 electronic devices 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 INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT DOWCORNING.COM, OR FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION.**

## LIMITATIONS

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

## 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, [dowcorning.com](http://dowcorning.com) or consult your local Dow Corning representative.

## LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.**

## DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

## HOW CAN WE HELP YOU TODAY?

Tell us about your performance, design and manufacturing challenges. Let us put our silicon-based materials expertise, application knowledge and processing experience to work for you.

**For more information** about our materials and capabilities, visit **[dowcorning.com](http://dowcorning.com)**.

To discuss how we could work together to meet your specific needs, email **[electronics@dowcorning.com](mailto:electronics@dowcorning.com)** or go to **[dowcorning.com/contactus](http://dowcorning.com/contactus)** for a contact close to your location. Dow Corning has customer service teams, science and technology centers, application support teams, sales offices and manufacturing sites around the globe.

*We help you invent the future.™*

**[dowcorning.com](http://dowcorning.com)**