

IMAGINE: Minding the Gap in Thermal Management

Heat is the enemy of performance and reliability in automotive electronics. But designers have in Dow Corning a powerful ally for thermal management.

Dow Corning is an industry leader in silicone thermal interface materials for demanding electronics applications. Our broad portfolio of thermally conductive solutions delivers thermal conductivity from 0.5 to 4.3 W/mK and low thermal resistivity across a range of bond line thicknesses. Offering optimized viscosities and surface chemistries, these materials can fill oddly shaped gaps or generate large contact areas to maximize heat transfer in advanced modules and power electronics applications.

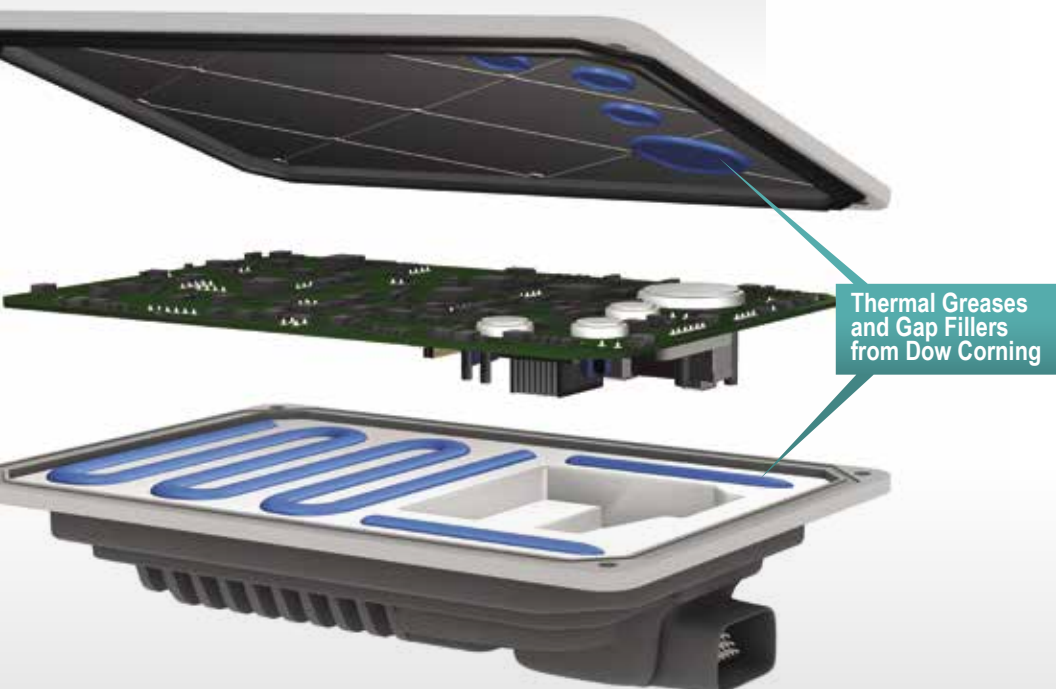
Select gap filler formulations from Dow Corning often incorporate microscopic spacer beads to control bond line thickness while addressing flatness tolerances and minor warping. Lastly, combined with Dow Corning's processing

expertise, our thermal interface materials can ease manufacturing challenges when part planarity and fit tolerances cannot be tightly controlled.

One Company: Many Automotive Solutions

Dow Corning is your source for collaborative innovation of new thermal management solutions. If you do not see what you need in our expansive product offering, contact us today to discuss your application or processing challenge. Our materials experts often can tailor a solution that will enable your design to meet your goals for performance, processing and cost.

Automotive Engine Control Unit



Product	Description	Thermal Conductivity (W/mK)	Cure Profile	Rheology Viscosity Thixotropy	Hardness
Sylgard® 160 Silicone Elastomer Kit	2-part siloxane elastomer; 1:1 mix ratio; good flowability with added flame resistance	0.62	24 hr @ 25°C 4 min @ 100°C	Viscosity, mixed: 4.8 Pa-sec 4,865 cP	56 ⁽¹⁾
Dow Corning® CN-8760 G A&B Kit	2-part, 1:1 mix ratio, gray encapsulant	0.67	24 hr @ 25°C 30 min @ 60°C	Viscosity, mixed: 3.2 Pa-sec 3,200 cP	45 ⁽¹⁾
Dow Corning® TC-4015 Dispensable Thermal Pad Kit	2-part, blue thermally conductive silicone	1.71	24 hr @ 25°C 148 min @ 40°C 48 min @ 75°C 16 min @ 100°C 10 min @ 125°C	Viscosity, mixed: 103.0 Pa-sec 103,000 cP	50 ⁽²⁾
Dow Corning® TC-4016 Dispensable Thermal Pad Kit	2-part, blue thermally conductive silicone with glass beads	1.71	24 hr @ 25°C 148 min @ 40°C 48 min @ 75°C 16 min @ 100°C 10 min @ 125°C	Viscosity, mixed: 103.0 Pa-sec 103,000 cP	50 ⁽²⁾
Dow Corning® TC-2030 Adhesive A/B Kit	2-part, 1:1 mix ratio, gray thermally conductive adhesive	3.04	60 min @ 130°C	Viscosity, mixed: 220 Pa-sec 220,000 cP Thixotropy: 1.8	92 ⁽¹⁾
Dow Corning® TC-2035 Adhesive A/B Kit	2-part, 1:1 mix ratio, reddish-brown thermally conductive adhesive	3.30 ⁽³⁾	30 min @ 125°C 10 min @ 150°C	Viscosity, mixed: 130 Pa-sec 130,000 cP Thixotropy: 2.8	95 ⁽⁴⁾

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.

- ⁽¹⁾Shore A durometer.
- ⁽²⁾Shore OO durometer.
- ⁽³⁾Preliminary data.
- ⁽⁴⁾Shore durometer, JIS Type A.

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.

To discuss how we could work together to meet your specific needs, email electronics@dowcorning.com or go to 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.

Images: AV21745, AV17143

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