

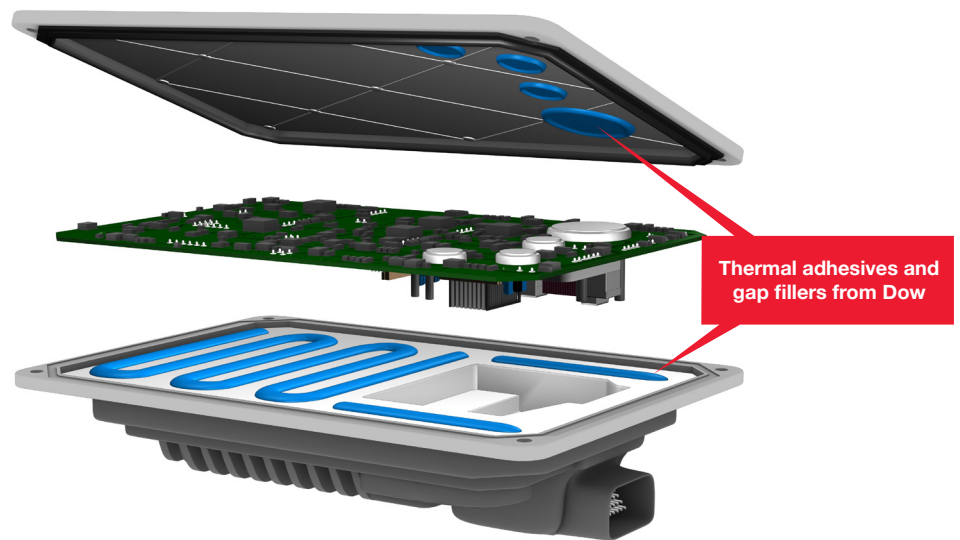
Thermal management for transportation applications

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

Dow is an industry leader in silicone thermal interface materials for demanding electronics applications. Our broad portfolio of thermally conductive solutions delivers a wide range of thermal conductivity 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 often incorporate microscopic spacer beads to control bond line thickness while addressing flatness tolerances and minor warping. Lastly, combined with Dow's processing expertise, our thermal interface materials can ease manufacturing challenges when part planarity and fit tolerances cannot be tightly controlled.

Automotive engine control unit



One company: Many automotive solutions

Dow 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.

Imagine

Featured products

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⁾
DOWSIL™ TC-4605 HLV A/B Kit	2-part, 1:1 mix ratio, gray thermally conductive encapsulant	1.00	60 min @ 120°C	Viscosity, mixed: 2.9 Pa-sec 2,900 cP	30 (1 - Shore A)
DOWSIL™ TC-4515 Gap Filler A/B Kit	2-part, 1:1 mix ratio, blue thermally conductive gap filler	1.50	150 min @ 25°C 30 min @ 80°C	Viscosity, mixed: 240 Pa-sec 240,000 cP Thixotropy: 5.0	50 (Shore 00)
DOWSIL™ TC-4525 Gap Filler A/B Kit	2-part, 1:1 mix ratio, blue thermally conductive gap filler	2.50	120 min @ 25°C 20 min @ 50°C 10 min @ 80°C	Viscosity, mixed: 217 Pa-sec 217,000 cP Thixotropy: 4.3	55 (Shore 00)
DOWSIL™ TC-4535 CV Gap Filler A/B Kit	2-part, 1:1 mix ratio, blue thermally conductive gap filler	3.50	60 min @ 25°C	Viscosity, mixed: 205 Pa-sec 205,000 cP Thixotropy: 3.6	52 (Shore 00)
DOWSIL™ 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⁾
DOWSIL™ 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: 103.0 Pa-sec 103,000 cP Thixotropy: 2.8	95 ⁽⁴⁾

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

⁽¹⁾Shore A durometer.

⁽²⁾Shore OO durometer.

⁽³⁾Preliminary data.

⁽⁴⁾Shore durometer, JIS Type A.

Learn more

We bring more than just an industry-leading portfolio of advanced silicone-based materials. As your dedicated innovation leader, we bring proven process and application expertise, a network of technical experts, a reliable global supply base and world-class customer service.

To find out how we can support your applications, visit consumer.dow.com/pcb.

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