DOW CORNING

Electronics
Solutions

IMAGINE: Encapsulating Reliable Performance

Automotive electronics are rapidly multiplying, and they are adding value to everything from vehicle safety to reliability to comfort to energy efficiency. So, it's become more critical than ever to protect sensitive electronic components from harsh under-the-hood environmental factors, such as moisture, extreme temperatures, salt and severe mechanical stresses stemming from vibration or mismatched coefficients of thermal expansion.

Silicone encapsulants and gels from Dow Corning protect the electronic applications that conformal coatings and lid seals alone cannot. Specifically, our broad portfolio of proven silicone solutions expands options for embedding tall components and complex architectures to protect them from damage in harsh automotive environments.

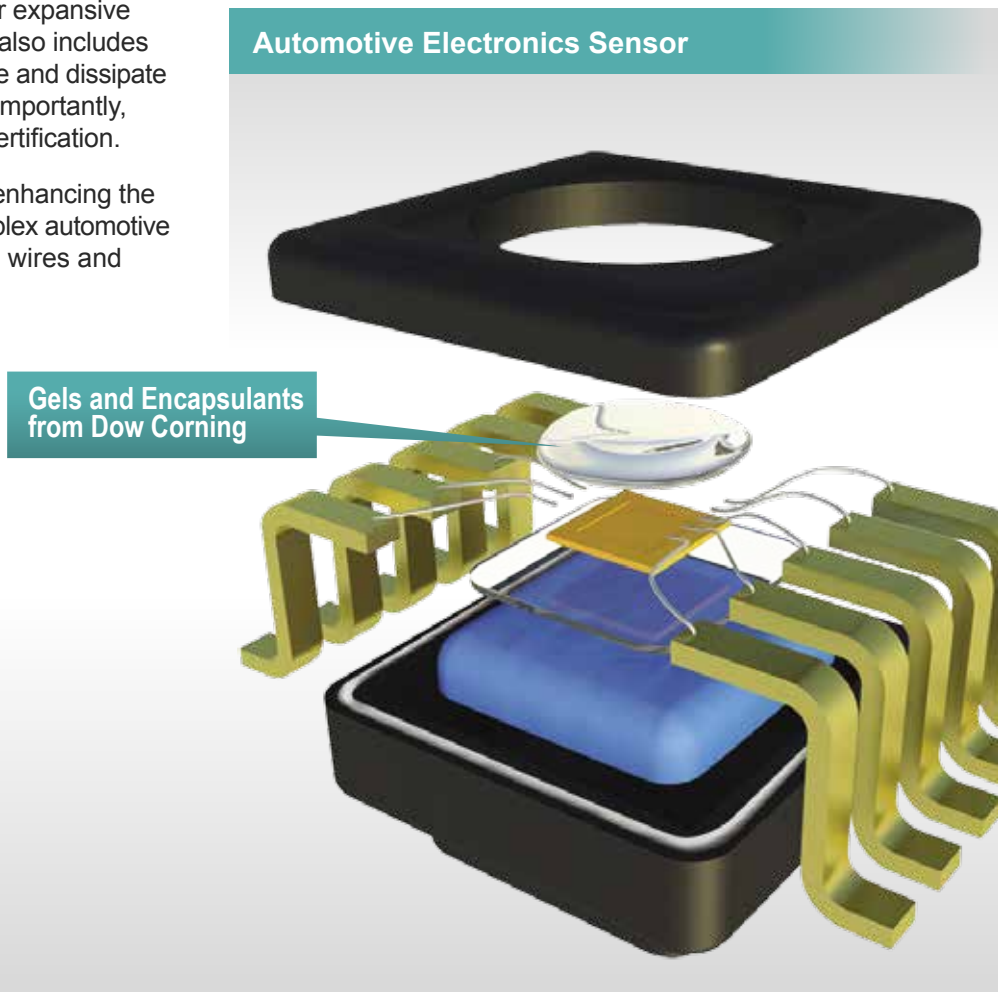
As a class of materials, our silicones offer low modulus, versus epoxy and urethane materials, for reduced stress from vibration, mechanical shock and thermal cycling. Our ultralow-modulus silicone gels, in particular, can encapsulate the most fragile wires to deliver strong protection against both contamination and stress. Our expansive portfolio of silicone encapsulants and gels also includes thermally conductive grades to help manage and dissipate heat away from sensitive electronics. And importantly, many of our materials have achieved UL certification.

All these qualities offer unique options for enhancing the performance, reliability and lifetime of complex automotive electronics designs – even those with thin wires and connections. But Dow Corning's silicone technology also can help reduce cost of ownership by offering improved manufacturing efficiencies. Combined with our processing expertise, our advanced materials can help simplify production through low-temperature cures or reduce cycle times via fast-cure solutions. In addition, we are constantly exploring next-generation silicone solutions to develop grades that are increasingly resistant to temperature extremes.

One Company: Many Automotive Solutions

Dow Corning offers the proven materials, expertise and collaborative culture to help you find the right encapsulant or gel for your automotive electronics application. If you cannot find an off-the-shelf silicone product that meets an application's precise specifications, contact us. Our materials experts often can tailor a solution that will enable you to meet your goals for performance, processing and cost.

Automotive Electronics Sensor



Product	Description	Dielectric Protection *(Dielectric Strength)*	Thermal Conductivity (W/mK)	Mixed Viscosity (Pa.sec)	Cure Profile	Hardness	UL Recognition
Sylgard® 567 Primerless Encapsulant Kit	2-part encapsulant; self-priming	405 V/mil 16 kV/mm	0.29	0.21	180 min @ 70°C 120 min @ 100°C 85 min @ 115°C 15 min @ 150°C	38-42(1)	94 V-0
Sylgard® 170 Silicone Elastomer Kit	2-part polydimethylsiloxane elastomer; 1:1 mix ratio	493 V/mil 19 kV/mm	0.48	2.1	24 hr @ 25°C 45 min @ 50°C 25 min @ 70°C 15 min @ 85°C 10 min @ 100°C	46.8(1)	94 V-0
Sylgard® 170 Fast Cure Silicone Elastomer Kit	2-part siloxane elastomer; 1:1 mix ratio; low viscosity with moderate thermal conductivity	350 V/mil 14 kV/mm	0.4	2.4	0.2 hr @ 25°C	43(1)	94 V-0
Sylgard® 160 Silicone Elastomer Kit	2-part siloxane elastomer; 1:1 mix ratio; good flowability with added flame resistance	475 V/mil 19 kV/mm	0.62	0.49	24 hr @ 25°C 4 min @ 100°C	56(1)	94 V-0
Sylgard® 527 A&B Silicone Dielectric Gel	2-part colorless or red gel	425 V/mil 17 kV/mm	NA	0.47	210 min @ 100°C 75 min @ 125°C 35 min @ 150°C	113 gm(2)	NA
Dow Corning® 3-4207 Dielectric Tough Gel Kit	2-part, translucent green, 1:1 mix ratio, fast-room-temperature-cure, tough gel with UV indicator, conditional primerless adhesion and good flame resistance	420 V/mil 17 kV/mm	NA	0.42	90 min @ 25°C 10 min @ 50°C 3 min @ 100°C	59(1)	94 V-1
Dow Corning® 3-4241 Dielectric Tough Gel Kit	2-part, translucent green, 1:1 mix ratio, fast-heat-cure, tough gel with UV indicator, conditional primerless adhesion and good flame resistance	440 V/mil 17 kV/mm	NA	0.42	10.6 hr @ 25°C 2 min @ 125°C	63(1)	94 V-1
Dow Corning® 3-4150 Dielectric Gel Kit	2-part, transparent green, 1:1 mix ratio, fast-room-temperature-cure gel	385 V/mil 15 kV/mm	0.18	0.47	90 min @ 25°C	117 gm(2)	NA
Dow Corning® 3-4154 Dielectric Gel Kit	2-part, clear, 1:1 mix ratio gel	450 V/mil 18 kV/mm	NA	0.54	180 min @ 80°C 105 min @ 100°C	112 gm(2)	NA
Dow Corning® 3-6635 Dielectric Gel	1-part, clear, low-temperature gel	520 V/mil 20 kV/mm	NA	0.69	120 min @ 100°C	69 gm(2)	NA

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)Gel hardness.

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.

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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 SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

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