

IMAGINE: Affixing Reliability to Printed Circuit Boards

As automobiles grow more reliant on – and more populated by – circuit boards and assemblies, the automotive environment is as harsh as ever. As a consequence, the industry is seeking innovative protective coatings that can protect against moisture and chemicals, ease assembly and minimize additional weight.

With more than six decades serving customers in the automotive industry, Dow Corning brings proven silicone solutions, unparalleled expertise and a dependable global supply to address these challenges.

Our portfolio of high-performance conformal coatings and adhesives offers expanded options for lower weight, simplified assembly and flexibility in design. These products offer improved thermal stability, low modulus and easier reworkability compared to conventional organic coatings. These collective qualities allow our silicone coatings and adhesives to deliver a unique combination of strong structural bonds and reliable protective seals against moisture, chemicals and vibration.

Our coatings and adhesives provide some of the most time-tested and dependable performance under high- and low-temperature conditions, making them proven and effective solutions for protecting your most sensitive electronic assemblies.

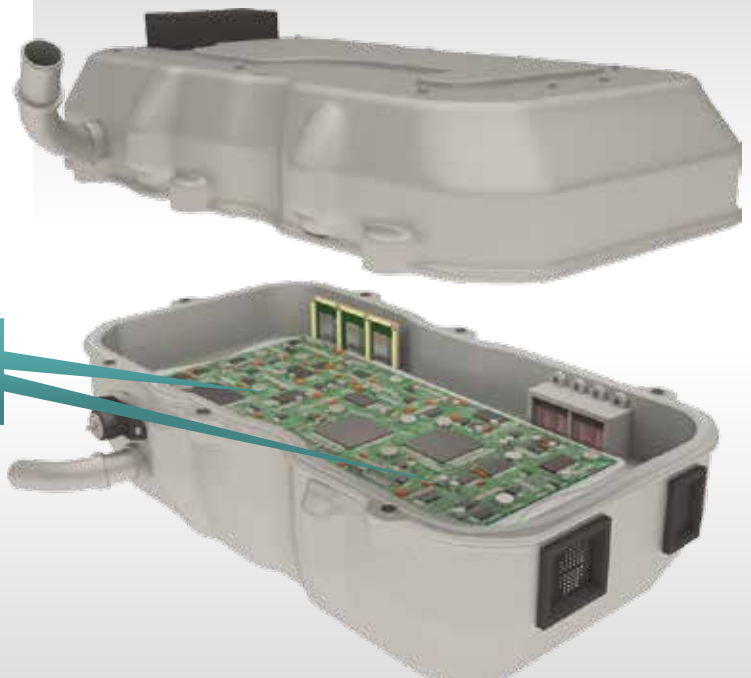
Dow Corning's patented family of adhesives cures much faster at moderate temperatures (85-100°C) than conventional heat-cured silicones, enabling faster throughput and lower energy costs. Designed for low to no voids by curing below the boiling point of moisture, the adhesives form reliable bonds between a much broader variety of plastics, metals, ceramics and cured elastomers.

With Dow Corning as your innovation partner and materials resource, you can explore new options for enhancing the performance, reliability and lifetime of your circuit boards and assemblies. Our advanced materials offer flexible processing options for low-temperature cures that can be accelerated by heat for streamlining costs or increased productivity.

One Company: Many Automotive Solutions

Dow Corning offers the proven materials, expertise and collaborative culture to help you get the job done right. If you cannot find an off-the-shelf solution that meets your precise specifications, contact us. Our materials experts often can tailor a solution that will enable your circuit board application to meet its goals for performance, processing and cost.

Automotive Power Control Unit



Conformal Coatings
and Adhesives from
Dow Corning

Product	Description	Viscosity (Pa.sec)	Heat Cure Profile	Hardness	UL Recognition
Dow Corning® 3-6265 HP Adhesive	1-part, black, nonflowing adhesive with high tensile strength	1,070	240 min @ 100°C 25 min @ 125°C 10 min @ 150°C	68 ⁽¹⁾	94 V-0
Dow Corning® 3-6265 Thixotropic Adhesive	1-part, black, nonflowing adhesive with high tensile strength; UV indicator for inspection	(Low Shear) 10,200 (High Shear) 2,350	60 min @ 125°C 30 min @ 150°C	60 ⁽¹⁾	NA
Dow Corning® 7091 Adhesive/Sealant	1-part, gray or white, nonflowing adhesive/sealant with good adhesion	Thixo	NA	36 ⁽¹⁾	94 HB
Dow Corning® 3145 Adhesive/Sealant	1-part; clear; moisture RTV; nonflowing; high strength, Mil Spec	Thixo	NA	45-51 ⁽¹⁾	MIL-A-46146, Group I and II
Dow Corning® 3165 Fast Tack RTV Adhesive Sealant	1-part, gray, moisture-cure RTV adhesive	Thixo	NA	35 ⁽¹⁾ ; 83 ⁽²⁾	94 V-0
Dow Corning® 3-1953 Conformal Coating	1-part; translucent; fast moisture-RTV cure with mild heat acceleration possible; soft; stress-relieving; contains UV indicator	0.35	60°C heat will accelerate	34 ⁽¹⁾	94 V-0 and 746E
Dow Corning® 1-4105 Conformal Coating	1-part; clear; fast heat cure; soft; stress-relieving; UL; contains UV indicator; suitable for use as a protective coating for rigid and flexible circuit boards	0.45	5 min @ 100°C	64 ⁽²⁾	94 V-1 and 746E
Dow Corning® 3-1965 Conformal Coating	1-part; clear; fast moisture-RTV cure with mild heat acceleration possible; low viscosity; soft; stress-relieving; contains UV indicator; solvent-based, containing 10% octamethyltrisiloxane	0.12	60°C heat will accelerate	33 ⁽¹⁾	94 V-0
Dow Corning® 1-2577 Conformal Coating	1-part, transparent, medium-viscosity conformal coating with firm, abrasion-resistant surface after cure; solvent-based, containing 20% toluene	0.95	60°C heat will accelerate	80 ⁽¹⁾ ; 20 ⁽³⁾	94 V-0
Dow Corning® 1-2577 Conformal Coating Low VOC	1-part; clear; RTV cure with mild heat acceleration possible; hard, slick finish with abrasion resistance; solventborne (VOC-exempt in many areas); UL and Mil Spec; contains UV indicator; solvent-based, containing 60% 1 cSt polydimethylsiloxane fluid	0.97	60°C heat will accelerate	85 ⁽¹⁾ ; 25 ⁽³⁾	94 V-0
Dow Corning® 1-2620 Dispersion	1-part; clear; moisture-RTV cure with mild heat acceleration possible; low viscosity; hard, slick finish with abrasion resistance; solventborne; UL and Mil Spec; contains UV indicator; solvent-based, containing 17% toluene and 13% xylene	0.14	60°C heat will accelerate	80 ⁽¹⁾	94 V-0
Dow Corning® 1-2620 Dispersion Low VOC	1-part, transparent, low-viscosity conformal coating with firm, abrasion-resistant surface after cure; low-VOC version of Dow Corning® 1-2620 Dispersion; solvent-based, containing 70% octamethyltrisiloxane	0.35	60°C heat will accelerate	80 ⁽¹⁾	94 V-0

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⁾Shore D durometer.

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, AV21089

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Form No. 11-3415-01