Product Guide

Affixing Reliability to Printed Circuit Boards

DOWSIL™

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 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 device assemblies.

Dow'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.

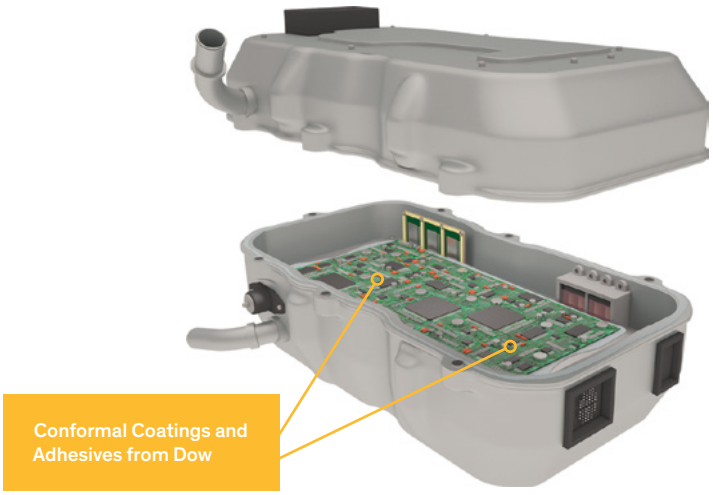
With Dow as your innovation partner and materials resource, you can explore new options for enhancing the performance, reliability and lifetime of your circuit boards and assemblies.

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 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



Imagine

Featured Products

Product	Description	Viscosity (Pa.sec)	Heat Cure Profile	Hardness	UL Recognition
DOWSIL™ 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
DOWSIL™ 3-6265 Thixotropic Adhesive	1-part, black, nonflowing adhesive with high tensile strength; UV indicator for inspection	10,200 (Low Shear) 2,350 (High Shear)	60 min @ 125°C 30 min @ 150°C	60(1)	NA
DOWSIL™ 7091 Adhesive Sealant	1-part, gray or white, nonflowing adhesive/sealant with good adhesion	Thixo	NA	36(1)	94 HB
DOWSIL™ 3145 RTV Adhesive Sealant	1-part; clear; moisture RTV; nonflowing; high strength, Mil Spec	Thixo	NA	45-51(1)	MIL-A-46146, Group I and II
DOWSIL™ 3165 RTV Adhesive Sealant (Fast Tack)	1-part, gray, moisture-cure RTV adhesive	Thixo	NA	35(1); 83(2)	94 V-0
DOWSIL™ 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
DOWSIL™ 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
DOWSIL™ 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
DOWSIL™ 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
DOWSIL™ 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
DOWSIL™ 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
DOWSIL™ 1-2620 Dispersion (Low VOC)	1-part, transparent, low-viscosity conformal coating with firm, abrasion-resistant surface after cure; low-VOC version of DOWSIL™ 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 sales office or your Global Dow Connection before writing specifications on this product.
(1)Shore A durometer. (2)Shore OO durometer. (3)Shore D durometer.

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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S90431/E89548 Form No. 11-3415-01 A S2D