DOW CORNING

Solar
Solutions

Silicon-based Photovoltaic Solutions

A Portfolio of PV Materials from Dow Corning

Welcome to the Photovoltaic Material Selection Guide

Dow Corning delivers silicon-based technology and high-performance silicone products that help create more reliable solar systems to increase kW/hour output and profitability. With material solutions tested to meet the specific requirements of the solar energy industry, we can help you lower costs, increase durability, reliability and improve performance.

As an innovator in PV assembly and integration solutions, Dow Corning offers materials that can increase durability, efficiency and performance while reducing manufacturing costs. The inherent properties of silicones — especially their stability and transparency — provide you with numerous advantages over incumbent organics.

Built on more than 70 years of expertise, Dow Corning is a global partner, collaborating with leading solar companies to improve levelized cost of energy for solar power.

We invite you to review our selection guide and contact one of our solar experts. Please see the back cover for more information. And if you have questions, please do not hesitate to contact us at ***solar.solutions@dowcorning.com***. Because at the end of the day, your success is our success.

All products listed in this selection guide are *Dow Corning*® brand products.

	Dow Corning® Brand	Description/Advantages	Cure System	Mix Ratio/ By Weight	Color	Viscosity cPs Extrusion Rate g/min	Specific Gravity Mixed Parts	Working Time @ 25 °C	Cure Time/ Temperature	Thermal Conductivity	Shelf Life	UL Ratings
PV Cell Adhesive	PV-5802 Electrically Conductive Adhesive	• Electrical and mechanical bonding for back-contact module • Stencil printing for automatic module assembling process • Curing profile matches typical lamination • Low CTM (cell-to-module) power loss • Superior stability and durability • Low material consumption	Addition cure	1-part	Gray	95,000 cPs	3.95 g/cm^3	72 hours	10 minutes @ 150 °C	N/A	12 months	N/A
PV Cell Encapsulant	PV-6212 Cell Encapsulant	• High optical transmission • UV transparent to 250 nm • Adhesion to glass, PET-based PV back-sheet and solar cells • Inherently UV stable • Excellent humidity resistance • Superior electrical insulation • Fast heat cure (100 °C) • PID resistant	Addition cure	1:1; 2-part	Transparent/ translucent	Part A 53,200 cPs Part B 51,600 cPs	0.97	1 hour	T90 @ 110 °C 22.5 seconds	0.171 W/(m K)	12 months	N/A
PV Junction Box Potting Agent	PV-7010 Potting Agent	• Proven solution in PV industry • Fast room temperature or heat cure • Thick section cure • No solvents or cure byproducts • Translucent material • Minimal shrinkage	Addition cure	1:1; 2-part	Translucent blue and green	Part A 425 cPs Part B 400 cPs	0.98	5-10 minutes	90-100 minutes @ 25 °C 10-15 minutes @ 50 °C 2-5 minutes @ 75 °C	0.20 W/(m K)	12 months	UL 94 V1; HAI/HWI/CTI=0; RTI 105 °C; (f2)-UV/H_2O exposure
	PV-7030R Potting Agent	• Fast room temperature or heat cure • Thick section cure • No solvents or cure byproducts • Minimal shrinkage	Addition cure	1:1; 2-part	Black	Part A 2,835 cPs Part B 2,733 cPs	1.2	8-10 minutes	3.25 hours @ 25 °C 18.5 minutes @ 50 °C 4.3 minutes @ 75 °C	0.28 W/(m K)	12 months	UL 94 V1; HAI/CTI=0; HWI=2; CTI/inclined plane tracking 600 V and greater; RTI 105 °C; (f2)-UV/H_2O exposure
	PV-7321 Potting Agent	• Proven solution in PV industry • Good thermal conductivity • Excellent dielectric properties	Condensation cure	10:1; 2-part	White	Mixed: 8,000 cPs	1.25	22 minutes	72 hours @ 25 °C and 50% RH	0.31 W/(m K)	12 months	UL 94 HB; HAI=0; HWI=3; CTI=0; RTI 105 °C
	PV-7326 Potting Agent	• High thermal conductivity • Flame resistance V0 level	Condensation cure	6:1	White and black	Mixed: 3,300 cPs	1.48	7.6 minutes	72 hours @ 25 °C and 50% RH	0.54 W/(m K)	12 months	IEC 60695-11-10, -20; CTI=0; RTI 105 °C
PV Junction Box Adhesive	Solar PV InstantSeal	• Adhesion to typical PV substrates • Safe to handle – nonhazardous composition and byproducts • Clear product improves module aesthetics	Moisture cure	1-part	Clear	200,000 cPs at application temperature	1.06	15 minutes with a green strength of 15 psi	48 hours @ 25 °C – 2 mm	N/A	12 months	UL 94 HB; RTI 105 °C
PV Frame Sealant	PV-8101F Sealant*	• Adhesion to typical PV substrates • Fast tack-free time • Flexible rubber • Fast, deep section cure	Moisture cure	1-part	White and black	210 g/minute	1.41	4 minutes and 50% RH	24 hours @ 25 °C and 50% RH – 2 mm	N/A	12 months	UL 94 HB; HWI=2; HAI=0; CTI=0; RTI 105 °C
	PV-8007 Neutral Sealant	• High-performance silicone adhesive/sealant with fast green strength • High elasticity after cure allows flexibility in harsh conditions • Adhesion to typical PV substrates • Protects against mechanical shock and thermal cycling stress	Moisture cure	1-part	White and black	170 g/minute	1.56	10 minutes and 50% RH	24 hours @ 25 °C and 50% RH – 2 mm	N/A	12 months	UL 94 V1 (6 mm) HB (3 mm); UL RTI 105 °C; UL HAI=1; HWI=1; CTI=0
	PV-8080 Neutral Sealant	• Adhesion to typical PV substrates • Protects against mechanical shock and thermal cycling stress • High-performance with high elasticity after cure	Moisture cure	1-part	White and bright white	197 g/minute	1.51	10-15 minutes and 50% RH	24 hours @ 25 °C and 50% RH – 2.5 mm	N/A	12 months	UL 94 HB; HWI=2; HAI=0; CTI=0; RTI 105 °C
	PV-804 Neutral Sealant	• Proven solution in PV industry • Adhesion to typical PV substrates • Protects against mechanical shock and thermal cycling stress at components	Moisture cure	1-part	White and black	190 g/minute	1.4	30 minutes	24 hours @ 25 °C and 50% RH – 2 mm	N/A	12 months	UL 94 V1 (5 mm) HB (3 mm); HWI=2; HAI=0; CTI=1; RTI 105 °C; (f2)-UV/H_2O exposure
PV Structural Bonding Sealants	PV-8303 Ultra Fast Cure Sealant	• Adhesion to typical PV substrates • Ultra-fast cure for fully automated processes • Two-part product providing customized cure rate using *Dow Corning*® PV-8300 Base	Condensation cure	2-part base; catalyst 7:1	Black	190 g/minute	1.31	5-10 minutes	2.5 hours @ 25 °C	N/A	Catalyst: 12 months Base: 12 months	UL 94 HB; HWI=2; HAI=3; CTI=0; RTI 105 °C
	PV-8301 Fast Cure Sealant	• Adhesion to typical PV substrates • Fast cure allowing increased production rates • Two-part product providing customized cure rate using *Dow Corning*® PV-8300 Base	Condensation cure	2-part base; catalyst 10:1	Black	190 g/minute	1.31	20-25 minutes	8 hours @ 25 °C	N/A	Catalyst black: 14 months Base: 14 months	UL 94 HB; HWI=3; HAI=0; CTI=0; RTI 105 °C
	PV-8030 Adhesive	• Adhesion to typical PV substrates • Protects against mechanical shock and thermal cycling stress at components	Moisture cure	1-part	White and black	110 g/minute	1.34	20-30 minutes	24 hours @ 25 °C and 50% RH – 3 mm	N/A	18 months	UL 94 HB; HWI=2; HAI=2; CTI=0; RTI 105 °C

Please consult the data sheets for complete information on testing methods and conditions.

RH = Relative humidity

*Available in China only

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Premier Partner Network is the safe, convenient way to get the products and documents you need in just a few clicks — one more example of what we're doing to help you meet your goals for speed and cost-competitiveness in the rapidly developing PV market.

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Dow Corning has sales offices and manufacturing sites, as well as science and technology laboratories, around the globe. For more information, please visit ***dowcorning.com/solar*** or e-mail ***solar.solutions@dowcorning.com***.

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