

Photovoltaic and Module Assembly and Integration

A Portfolio of Material Solutions from Dow Corning



Welcome to the Solar Module Assembly Product Selection Guide.

As one of the leading material houses in the world, we offer you many options across the solar value chain so that you can select the optimal solutions for your solar module and assembly operations. With material solutions tested to meet the specific requirements of the solar industry, we can help you lower costs, increase durability and improve performance.

The inherent properties of silicones—especially UV stability and ultra-transparency—provide you with numerous advantages over incumbent organics. Many of our solutions, including our breakthrough encapsulation solution, bring the advantages of superior durability, efficiency and performance and reduced manufacturing costs.

We continue to innovate new solutions to benefit our customers, building on our more than 65 years of experience in silicone chemistry—including the construction, electronics and industrial assembly industries—and more than two decades supplying the solar industry. This experience and expertise enables Dow Corning Solar Solutions to offer you the peace of mind that comes with durable, high-performing products, delivered reliably to your doorstep around the world.

We invite you to review our selection guide and contact one of our solar experts, or register for an online business account, Premier Services. 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.

| | Dow Corning® Brand | Description/ Advantages | Cure System |
|-------------------------------|---------------------------------|---|--------------------------------------|
| PV Cell and Module Coating | 1-2577 Low VOC Coating | • Can be accelerated with mild heat to provide faster cure times • Excellent abrasion resistance • Resists humidity and other harsh environments • Good dielectric properties • Firm, dry surface for better handling after cure • VOC exempt solvent-borne • Medium viscosity | Silicone solvent based moisture cure |
| | 1-2620 Low VOC Coating | Low viscosity version of 1-2577 for consumer product applications | Silicone solvent based moisture cure |
| PV Cell Encapsulant | PV-6010 Cell Encapsulant | • Compatible with automated dispensing equipment • Moderate temperature cure (80°C/176°F) • Self-priming adhesion | Addition cure |
| | PV-6100 Cell Encapsulant | • Front side encapsulant • High optical transmission • UV transparency down to 200 nm • Inherently UV stable • Excellent humidity resistance • Fast heat cure (100°C) | Addition cure |
| | PV-6120 Cell Encapsulant | • Back side encapsulant • Opaque material enabling alternative module visual appearance • Inherently UV stable • Excellent humidity resistance • Self-priming adhesion • Fast heat cure (100°C) | Addition cure |
| | PV-6150 Cell Encapsulant | • Back side encapsulant • Inherently UV stable • Excellent humidity resistance • Self-priming adhesion • Fast heat cure (100°C) | Addition cure |
| 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 |
| | PV-7020 Potting Agent | • High thermal conductivity • Heat cure • Thick section cure • No solvents or cure byproducts • Minimal shrinkage | Addition cure |
| | PV-7030 Potting Agent | • Adhesion with PV substrates and junction box materials • Fast room temperature or heat cure • Thick section cure • No solvents or cure byproducts • Minimal shrinkage | Addition cure |
| | PV-7311 Potting Agent | • Broader compatibility with PV substrates and junction box materials • Fast room temperature cure • Thick section cure • Minimal shrinkage | Condensation cure |
| PV Junction Box Adhesive | Solar PV InstantSeal | • Excellent adhesion to typical PV substrates • Safe to handle—nonhazardous composition and byproducts • Clear product improves module aesthetics | Moisture cure |
| | 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 |
| | PV-8101 Sealant | • Locally made in China for China customers • Good adhesion to typical PV substrates • Fast tack-free time • Flexible rubber | Moisture cure |
| | PV-8301 Fast Cure Sealant | • Adhesion to typical PV substrates • Fast cure allowing increased production rates • Two-part product providing customized cure rate using our Dow Corning® PV-8300 Base | Condensation cure |
| | 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 our Dow Corning® PV-8300 Base | Condensation cure |
| | PV-8030 Adhesive | • Adhesion to typical PV substrates • Protects against mechanical shock and thermal cycling stress at components | Moisture cure |

PV Rail Bond Adhesive

PV Frame Sealant

Please consult the data sheets for complete information on testing methods and conditions. All products available globally except PV-8101 Sealant, which is available only in China. *RH: relative humidity

| 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 | Packaging |
|---|---------------------------|--|------------------------------------|--|---|-------------------------|---|--|--------------------------------|
| 1-part | Clear | 1050 cPs | 0.88 | 5.5 minutes | 60 minutes @ 25°C - .075 mm; 1 minute at 60°C and 15% RH* | N/A | 36 months | UL 94 V0, RTI 105°C | Bottles, pails and drums |
| 1-part | Clear | 350 cPs | 0.88 | 5 minutes | 60 minutes @ 25°C - .075 mm; 1 minute at 60°C and 15% RH* | N/A | 24 months | UL 94 V0, RTI 105°C | Bottles, pails and drums |
| 1:1; 2-part | Clear | Part A 925 cPs Part B 950 cPs | 1.00 | 24 hours | 30 minutes @ 80°C | N/A | 12 months | | Pails and drums |
| 1:1; 2-part | Trans- parent | Part A 600 cPs Part B 600 cPs | 0.98 | 1 hour | 0.9 minutes @ 100°C | N/A | 12 months | UL pending | Drums |
| 1:1; 2-part | White | Part A 5300 cPs Part B 5200 cPs | 1.3 | 1 hour | 1 minute @ 100°C | 0.32 | 12 months | UL pending | Drums |
| 1:1; 2-part | Trans- parent | Part A 440 cPs Part B 280 cPs | 0.97 | 1 hour | 1 minute @ 100°C | N/A | 12 months | UL pending | Drums |
| 1:1; 2-part | Trans- lucent Green | Part A 425 cPs Part B 400 cPs | 0.98 | 10 minutes | 90 minutes @ 25°C 10 minutes @ 50°C 5 minutes @ 75°C 3 minutes @ 100°C | 0.20 | 12 months | UL 94 V1, UL HAI/HWI/CTI=0; CTI/inclined plane tracking 600 V and greater; RTI 105°C (f2)-UV/H ₂ O exposure | Cartridges, pails and drums |
| 1:1; 2-part | Gray | 14000 cPs | 2.36 | 6 hours | 30 minutes @ 120°C | 1.34 | 6 months | UL 94 V1, V0; RTI 105°C | Cartridges, pails and drums |
| 1:1; 2-part | Black | Part A 2835 cPs Part B 2733 cPs | 1.2 | 18 minutes | 90 minutes @ 25°C 28 minutes @ 50°C 6 minutes @ 75°C | 0.2868 | 12 months | UL 94 V1; HAI/CTI=0; HWI=1; CTI/inclined plane tracking 600 V and greater; RTI 105°C | Cartridges, pails and drums |
| 10:1; 2-part | Black | Base 4300 cPs Catalyst 5.6 cPs | 1.25 | 16 minutes | 24 hours @ 25°C | 0.31 | 6 months | UL pending | Cans, pails and drums |
| 1-part | Clear | 200000 cPs | 1.06 | 15 minutes @ 25°C with a green strength of 15 psi | 48 hours @ 25°C - 2 mm | N/A | 12 months | UL 94 HB; RTI 105°C | Pails and drums |
| 1-part | White and Black | 190 g/minute | 1.4 | 16 minutes @ 25°C | 24 hours @ 25°C and 50% RH* - 2 mm | N/A | 12 months | UL 94 HB; RTI 105°C | Cartridges, pails and drums |
| 1-part | White | 320 g/minute | 1.4 | 6 minutes, 50% RH* | 24 hours @ 25°C and 50% RH* | N/A | 12 months | UL 94 HB; HWI=2; CTI=0; RTI 105°C | Sausages and drums |
| 10:1; 2-part | White and Black | 204 g/minute | 1.31 | 20–25 minutes | 4 hours @ 25°C | N/A | Catalyst Black: 14 mos. Catalyst Clear: 12 mos. Base: 12 mos. | UL 94 HB; RTI 105°C | Pails and drums |
| 100 parts base to 14 parts catalyst by weight; 2-part | Black | 204 g/minute | 1.31 | 8–10 minutes | 18 minutes @ 25°C | N/A | Catalyst: 5 months Base: 12 months | UL pending | Pails and drums |
| 1-part | White | 115 g/minute | 1.34 | 20–30 minutes | 24 hours @ 25°C and 50% RH* - 3 mm | N/A | 12 months | UL 94 HB; RTI 105°C | Cartridges and drums |



Learn More

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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