

Powering innovative solutions

Materials for PV assembly and repair

As the global photovoltaic (PV) market continues to grow, the demand for durable, reliable and better performing solar modules is critical. Dow delivers a wide base of chemistries and technologies in high-performance materials – tested to meet the specific requirements of the solar industry – that help to create more reliable solar modules. Built on more than 50 years of expertise, we are collaborating with leading solar companies to improve durability, longevity, and performance of photovoltaic systems. We understand that materials drive innovation and are helping to solve the challenges in module manufacturing by leveraging our silicone, polyolefin, and polyurethane chemistries. Our successful material technologies are enabling PV module manufacturers to explore novel and more efficient designs. The designs for tomorrow's renewable energy needs. Offering encapsulants and potting for your electronic components, rail bonding, frame sealing and junction box adhesives, repair and protective coatings, and materials for optics, we can help to make your applications more efficient, and more reliable. Let us help you create modules with longer service life and better reliability. Contact one of our solar materials experts, and let's work together to make the global expansion of solar needed for the world's energy transition a reality.

Maximize reliable power conversion

From the solar panel's DC output a solar energy system requires high-performance, dependable components to reliably optimize and convert the energy to be used or stored. Advanced silicone materials allow enhanced warranties for the industry, based on their excellent aging resistance, under a wide range of harsh environments that outdoor devices can be exposed to during their lifetime. Our advanced adhesive, protective encapsulant and thermal management options protect outdoor electronics from environmental impacts, remove heat to raise performance efficiency, and offer long lifetime for solar power systems. Solar power inverters used on strings of PV modules allow the energy harnessed to be converted into a useful form in order to return to the grid, be stored in a battery, or be used by the consumer. Power optimizers and microinverters increase efficiency by mitigating power loss as a result of modules mismatch and allow more flexibility in solar installations.

Product	Consistency as supplied
Junction box potting agent	
DOWSIL™ PV-7326 Potting Agent	Liquid
Junction box adhesives, frame sealing	
DOWSIL™ PV-804 Neutral Sealant	Paste - no slump
Rail bonding, junction box bonding, frame sealing	
DOWSIL™ PV-8301 Fast Cure Sealant	Paste - no slump
DOWSIL™ PV-8303 Ultra Fast Cure Sealant	Paste - no slump
BIPV Structural glazing	
DOWSIL™ 993N Structural Glazing Sealant	Paste - no slump
DOWSIL™ 993 Structural Glazing Sealant	Paste - no slump
DOWSIL™ 994 Ultra Fast Bonding Sealant	Paste - no slump
DOWSIL™ 983 Structural Glazing Sealant	Paste - no slump
Power conversion assembly adhesives and sealants	
DOWSIL™ PV-804 Neutral Sealant	Paste - no slump



Viscosity or melt index	1- or 2-part	Relative density (mixed)	Cure time/temperature	Color or transparent	Hardness Shore A (*Shore 00)	UL ratings
3300 mPa-s	2	1, 42	Working time 7.6 min at 25°C Full cure time 75 hours at 25°C	White	37	UL 94: V0 UL 746A: HWI PLC2, HAI PLC0, UL746B: RTI 105
	1	1, 4	Tack-free time 30 min at 23°C 24 hours for each 2mm at 23°C	Black or White	39	UL 94: HB UL746A: HWI (5mm) PLC2, HAI (5mm) PLC0, CTI PLC1 UL 746B: RTI Elec 140, RTI Imp 105, RTI Str 115; UL 746C Outdoor UV/H20 f2
76000 mPa-s	2	1, 31	Snap time 20-25 min at 25°C Full cure 8 hours at 25°C	Black	38-44	UL 94: HB UL 746A: HWI PLC3, HAI PLC0, CTI PLC0; UL 746B: RTI 105 UL 746C: Outdoor UV/H20 f2
350000 mPa-s	2	1, 31	Snap time 8-10 min at 25°C Full cure 2.5 hours at 25°C	Black	38-44	UL 94: HB UL746A: HWI PLC2, HAI PLC3, CTI PLC0 UL746B: RTI 105
40000 mPa-s	2	1, 34	Snap time 20-60 min at 25°C	Black	39	
40000 mPa-s	2	1, 30	Working time 10-30 min Tack-free time 80-100 min at 25°C	Black	40	UL94: HB UL746A: HWI PLC2, HAI PLC0, CTI PLC0 UL746B: RTI 105
	2	1, 30	Tack-free time 5-18 min	Black	45	
40000 mPa-s	2	1, 30	Working time 10-25 min	Black	35-45	
	1	1, 4	Tack-free time 30 min at 23°C 24 hours for each 2mm at 23°C	Black or White	39	UL 94: HB UL746A: HWI (5mm) PLC2, HAI (5mm) PLC0, CTI PLC1 UL 746B: RTI Elec 140, RTI Imp 105, RTI Str 115 UL 746C: Outdoor UV/H20 f2



Silicone

