

Fortasun™ PV-8030 Adhesive

High-performance silicone adhesive

Features

- Adhesion to typical PV substrates
- Protects against mechanical shock and thermal cycling stress at components
- Excellent unprimed adhesion to PV substrates
- UL 94 HB, HWI=2, CTI=0
- RTI 105°C (221°F)

Composition

- One-part, neutral alkoxy-cure silicone sealant

Applications

- Bonding and sealing photovoltaic module components
- Used for rail bonding, frame sealing and junction box adhesion

Typical properties

Specification writers: These values are not intended for use in preparing specifications. Please contact your local DuPont sales office before writing specifications on this product.

CTM ¹	ASTM ²	Test	Unit	Result
As supplied				
0176		Color		White
		Consistency		Non-slump paste
0364	D2452	Extrusion rate ³	g/minute	110
0095		Tack-free time ⁴	Minutes	71
		Working time	Minutes	20-30
		Cure time at 25°C RH	Hours	24
Physical properties – cured 7 days at 25°C (77°F) and 50% relative humidity				
0022	D0792	Specific gravity at 25°C (77°F)		1.34
0099	D2240	Durometer hardness, Shore A		40
0137A	D412	Tensile strength	MPa	2.4
	C0794	Peel strength		
		Aluminum	pli	35
		Glass	pli	33
	C719	Joint movement capability	%	50

¹CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

²ASTM – American Society for Testing and Materials.

³Extrusion rate measured using 3.18mm diameter nozzle at 0.62 Mpa

⁴Tack-free time is the time required for the product to develop a non-tacky surface based on adhesion to a polyethylene film.

Description

Fortasun™ PV-8030 Adhesive is designed to provide long term bonding and to protect against moisture, environmental degradation, mechanical and thermal shock where room-temperature curing is preferred. It is recommended specifically for structural bonding to attach typical PV substrates.

How to use

Substrate preparation

All surfaces must be clean and dry. Degrease and wash off any contaminants that could impair adhesion. For suitable solvent recommendations, please contact your local DuPont technical support person.

How to apply

Apply a bead of Fortasun™ PV-8030 adhesive to one of the prepared surfaces, and then quickly cover with the other substrate to be bonded.

On exposure to moisture, the freshly applied material will “skin over” in about 40 minutes depending on room temperature and humidity conditions. Any tooling should be completed before this skin forms. Fortasun™ PV-8030 Adhesive will be tack free in about 71 minutes depending on temperature and humidity conditions.

Cure time

After skin formation, cure continues inward from the surface. Warning: very deep sections, especially when access to atmospheric moisture is restricted, will take longer to cure completely. Cure time is also extended at lower humidity levels.

Handling precautions

Product safety information required for safe use is not included in this document. Before handling, read product and material safety data sheets and container labels for safe use, physical, and health hazard information. The material safety data sheet is available on photovoltaics.dupont.com, or from your Dupont representative.

Usable life and storage

When stored at or below 30°C (86°F) in the original unopened containers, Fortasun™ PV-8030 Adhesive has a usable life of 18 months from the date of manufacture.

Because Fortasun™ PV-8030 Adhesive cures by reaction with moisture in air, keep the container tightly sealed when not in use. In drums, a skin may form on the surface. This should be removed before placing in dispensing equipment.

Packaging information

Fortasun™ PV-8030 Adhesive is available in cartridge and drum packaging. Detailed container size information may be obtained from your DuPont representative.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses. Fortasun™ PV-8030 should not be applied: to materials that bleed or are coated with oil, in totally confined spaces as the sealant requires atmospheric moisture to cure, when surface temperatures exceed 60°C, to frost-laden or damp surfaces, or for continuous immersion in water.

Fortasun™ has data regarding solar substrate durability that indicates that corrosion will occur for certain substrates over time. The corrosion of the metal rails on solar panels will eliminate adherence of the rail to the solar panel structure.

Health and environmental information

To support customers in their product safety needs, DuPont has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our Web site, photovoltaics.dupont.com or consult your local DuPont representative.

Limited warranty information—please read carefully

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

The DuPont sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

DuPont specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability.

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Materials Matter™



Fortasun™

Solar Silicones

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