

Fortasun™ PV-8301 Fast Cure Sealant

Fast cure silicone adhesive sealant

Features

- Adhesion to typical PV substrates
- Fast cure allowing increased production rates
- Two part product providing customized cure rate
- UL 94 HB; HWI=3; HAI=0; CTI=0; RTI 105°C (221°F), Outdoor UV/H2O pending

Composition

- Two-part, fast 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.

Property	Unit	Result
Fortasun™ PV-8301 Catalyst		
Color		Black
Viscosity	mPas or cP	76000
Specific gravity		1.4
Fortasun™ PV-8300 Base		
Color		White
Extrusion rate	Grams/ m	190
Specific gravity		1.31
Fortasun™ PV-8300 Base with Fortasun™ PV-8301 Catalyst		
Color		Black and white
Snap time (working time)	Minutes	20–25
Cure time @ 25°C	Hours	8
Specific gravity		1.31

Property	Unit	Result
Properties after full cure – 7 day at 23°C measured on 2 mm cured sheets		
Durometer hardness	Shore A	38–44
Tensile strength (H-Bar Test) ¹	Psi	174
	MPa	1.2
Elongation to break (H-Bar Test) ¹	%	80
Tensile strength (Sheet material test) ²	Psi	38–44
	MPa	2.1–2.4
Elongation to break (Sheet material test) ²	%	220
Adhesion via Peel Test – 7 day cure at 23°C		
Cohesive Failure	%	Pli
PPO, Anodized Al, Glass and Tedlar®	100	15–24

¹Test per external reference NFP 85-405, DTU 39.4

²Test per external reference ASTM D 412 (ASTM: American Society for Testing and Materials.)

Description

Fortasun™ PV-8301 Fast Cure Sealant is designed to provide long-term bonding and protection against moisture, environmental degradation, mechanical and thermal shock where cure speed is critical. It is recommended specifically for structural bonding to attach typical PV substrates.

How to use

Mixing

The Fortasun™ PV-8301 Catalyst is designed to be used with Fortasun™ PV-8300 Base in a mix ratio of 10 parts base to 1 part catalyst by weight. Suitable meter/mix equipment should be equipped with gear or piston metering pumps for base and catalyst, and a static mixer.

Curing conditions

Fortasun™ PV-8301 Fast Cure Sealant cures at room temperature and develops adhesion rapidly to metals, glass and plastic substrates. Adhesion is normally good to most substrates (see Note) without the use of primer, or of surface activation methods. If enhanced adhesion properties are needed, contact your local DuPont technical support for primer and surface treatment recommendations.

Humidity resistance

Fortasun™ PV-8301 Fast Cure Sealant shows good adhesive resistance to hot and humid conditions.

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.

Attention: When the information contained in the PSDS relates to a prototype material or a research & development sample, please be aware that hazard evaluation and handling recommendations are based on preliminary test data (if available), professional judgment in comparison with materials of a similar composition or a combination of these sources, as appropriate.

For further information, please consult DuPont Health, Environmental and Regulatory Affairs Department (see Health and Environmental Information section).

Usable life and storage

When stored between 5°C to 100°C (41°F to 212°F) in the original unopened containers, the usable life from the date of manufacture is listed below:

- Fortasun™ PV-8300 Base - 14 months

When stored at or below 25°C (77°F) in the original unopened containers, the usable life from the date of manufacture is listed below:

- Fortasun™ PV-8301 Catalyst Black - 14 months

Packaging information

Fortasun™ PV-8301 Fast Cure Sealant is available in standard pails and drums. 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.

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 website, 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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