Product information
Solar solutions

DUPONT
Fortasun™
Solar Silicones

Fortasun™ PV-7321 Potting Agent

Silicone potting material providing environmental protection and thermal management

Features

- Excellent dielectric properties
- Room temperature cure, no ovens required
- No additional priming step required

Composition

- Two-part 10:1 mix silicone elastomer supplied as flowable liquid

Applications

- Potting of solar module junction boxes

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.

Test	Unit	Results
Color		White
Viscosity mixed	Centipose or mPa s	8000
Durometer, shore A		31
Specific gravity[1]		1.25
Working time/snap time[2]	Minutes	22
Room temperature cure time[3]	Hours	72 hours @25°C
Dielectric strength	Volts/mil	635
	kV/mm	25
Thermal conductivity	Watts/meter °K	0.30
CTE	Ppm/degree C	211

[1]Cured
[2]Working time is the point that the material begins to thicken and starts to become non-flowable at room temperature
[3]Cured at 25°C and 50% RH.

Description

Fortasun™ PV-7321 Potting Agent is supplied as two-part liquid component kits comprised of base and catalyst to be mixed in a 10:1 ratio by weight. It is suitable for manual mixing or automated mixing and dispensing. When liquid components are thoroughly mixed, the mixture cures to a flexible elastomer.

How to use

Mixing two-part pottants

Fortasun™ PV-7321 Potting Agent is supplied in two parts that are mixed in a 10:1 ratio (base and catalyst).

Both base and catalyst part are moisture sensitive. Please keep opened packaging away from moisture. Catalyst is especially very sensitive to moisture. Purging with dry N2 is suggested when reopening packaging.

Fortasun™ PV-7321 Potting Agent can be dispensed manually or by using one of the available types of meter mix equipment. Typically, the components are readily mixed with static or dynamic mixers. Automated meter-mix equipment is normally used with high-volume processes. For low-volume applications, manual weighing and simple hand mixing may be appropriate.

Inaccurate proportioning or inadequate mixing may cause localized or widespread problems affecting the pottant properties or cure characteristics. If possible, the potential for air entrapment should be considered during design of the part and selection of a process to mix and dispense the pottant. Subjecting the pottant part to >28 inches Hg vacuum may be necessary to ensure a void-free, protective layer.

It is expected that some settling may occur in the base over time. Therefore, it is recommended that the base be mixed in a pail or drum roller before use and for automated line use, it is recommended that the base be applied from an agitated dispense tank.

It is recommended that the material be mixed, such as with a pail or drum roller upon receipt. The material should then be applied from an agitated dispensing tank.

Working Time and Cure

Working time (or pot life) is the time required for the initial mixed viscosity to double at room temperature (RT). For two-part, condensation cure products, such as Fortasun™ PV-7321 Potting Agent, the cure reaction begins when the catalyst and base are mixed. As the cure progresses, viscosity increases until the material cures. Fortasun™ PV-7321 Potting Agent will cure at room temperature, 50% relative humidity and the result is 72 hours.

Useful temperature ranges

For most uses, Fortasun™ PV-7321 Potting Agent should be operational over a temperature range of -45 to 150°C (-49 to 302°F) for long periods.

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 the Photovoltaics web site at photovoltaics.dupont.com, or from your DuPont representative, or distributor.

Usable life and storage

When stored at or below 35°C (95°F) in the original unopened containers, Fortasun™ PV-7321 Potting Agent has a usable life of 12 months from the date of manufacture.

Storage conditions and shelf life ("Use By" date) are indicated on the product label.

Packing information

Fortasun™ PV-7321 Potting Agent is available in standard pail and drum packaging. Detailed container size information may be obtained from your DuPont representative.

Limitations

Use of this product must be based on the results of your product testing, manufacturing processes, and end applications. Full environmental exposure testing is recommended for all applications.

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 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.

DuPont disclaims liability for any incidental or consequential damages.

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