

# Product Information

## Solar

# Dow Corning® Solar PV-804 Neutral Sealant

## FEATURES

- Proven solution in PV industry
- Adhesion to typical PV substrates
- Protects against mechanical shock and thermal cycling stress at components
- UL 94 HB
- UL RTI 105°C (221°F)

## COMPOSITION

- One-part, neutral alkoxy-cure silicone sealant

## High-performance silicone adhesive/sealant

### APPLICATIONS

Bonding, sealing, and encapsulating photovoltaic module components

### TYPICAL PROPERTIES

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning contact before writing specifications on this product.

CTM <sup>1</sup>	ASTM <sup>2</sup>	Test	Unit	Result
<b>As Supplied</b>				
0176		Color		White or black
		Consistency		Non-slump paste
0364	D2452	Extrusion Rate <sup>3</sup>	g/minute	190
0095		Tack-Free Time <sup>4</sup>	minutes	30

### Physical Properties – Cured 7 days at 23°C (75°F) and 50% Relative Humidity

0022	D0792	Specific Gravity at 23°C (75°F)		1.4
0099	D2240	Durometer Hardness, Shore A		39
0137A	D412	Tensile Strength	MPa	2.6
0137A	D412	Elongation at Break	%	620
0137A	D412	Tear Strength – Die B	kN/m	14

### Electrical Properties – Cured 7 days at 23°C and 50% Relative Humidity

0114	D149	Dielectric Strength	kV/mm	16
0249	D257	Volume Resistivity	ohm-cm	1.0x10 <sup>15</sup>

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

<sup>2</sup>ASTM – American Society for Testing and Materials.

<sup>3</sup>Extrusion rate measured using 3.18mm diameter nozzle at 0.62 Mpa

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

## DESCRIPTION

Dow Corning® Solar PV-804 Neutral Sealant is designed to provide long-term bonding and protection against moisture, environmental degradation, mechanical and thermal shock, and vibration where a room-temperature-curing product is preferred.

## HOW TO USE

### Substrate Preparation

All surfaces must be clean and dry. Degrease and wash off any contaminants that could impair adhesion. Suitable solvents include

isopropyl alcohol, acetone, or methyl ethyl ketone.

Certain plastics such as polypropylene and polytetrafluoroethylene may require specific surface treatment such as chemical etching or plasma treatment to obtain optimum adhesion.

### How to Apply

Apply a bead of Dow Corning Solar PV-804 Neutral Sealant to one of the prepared surfaces, then quickly cover with the other substrate to be bonded.

On exposure to moisture, the freshly applied material will “skin over” in

about 10 to 15 minutes at room temperature and 50% relative humidity. Any tooling should be completed before this skin forms. The surface is easily tooled with a spatula. *Dow Corning* Solar PV-804 Neutral Sealant will be tack free in about 30 minutes.

### **Cure Time**

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity), *Dow Corning* Solar PV-804 Neutral Sealant will cure to a depth of about 2 mm. 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. Before handling and packaging bonded components, users are advised to wait a sufficiently long time to ensure that the integrity of the adhesive seal is not affected. This will depend on many factors and should be determined by the user for each specific application.

### **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 DOW CORNING WEBSITE AT WWW.DOWCORNING.COM, OR

FROM YOUR DOW CORNING REPRESENTATIVE.

### **USABLE LIFE AND STORAGE**

When stored at or below 30°C (86°F) in the original unopened containers, *Dow Corning* Solar PV-804 Neutral Sealant has a usable life of 12 months from the date of manufacture.

Because *Dow Corning* Solar PV-804 Neutral Sealant cures by reaction with moisture in air, keep the container tightly sealed when not in use. A plug of used material may form in the tip of a tube or cartridge during storage. This is easily removed and does not affect the remaining contents. In pails, a skin may form on the surface. This should be removed before placing in dispensing equipment.

### **PACKAGING**

*Dow Corning* Solar PV-804 Neutral Sealant is available in 300- and 310-mL (10.1- and 10.5-fl oz) cartridges. For further details, please refer to your *Dow Corning* contact.

### **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, *Dow Corning* 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, [www.dowcorning.com](http://www.dowcorning.com), or consult your local *Dow Corning* 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 *Dow Corning's* 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.

*Dow Corning's* sole warranty is that the product will meet the *Dow Corning* 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.

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