

# *Dow Corning*<sup>®</sup> PV-8007 Neutral Sealant

## **FEATURES & BENEFITS**

- Adhesion to typical PV substrates
- Protects against mechanical shock and thermal cycling stress
- Fast green strength
- UL RTI 105°C (221°F)
- UL 94 HB
- UL HAI=1, HWI=1, CTI=0

## **COMPOSITION**

- One-part, neutral alkoxy-cure silicone sealant

High-performance silicone adhesive/sealant with fast green strength

## **APPLICATIONS**

- Bonding and sealing photovoltaic module components
- Used for frame sealing, junction box bonding and sealing of bus bar connections

## **TYPICAL PROPERTIES**

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

CTM <sup>1</sup>	ASTM <sup>2</sup>	Property	Unit	Result
<b>As Supplied</b>				
0176		Color		White or Black
		Consistency		Non-slump paste
0364	D2452	Extrusion Rate <sup>3</sup>	g/minute	170
		Green Strength (1 min.) <sup>4</sup>	Pa	1500
0095		Tack-Free Time <sup>5</sup>	minutes	15
<b>Physical Properties – Cured 7 days at 23°C (75°F) and 50% Relative Humidity</b>				
0022	D0792	Specific Gravity at 23°C (75°F)		1.51
0022	D2240	Durometer Hardness, Shore A		47
0137A	D412	Tensile Strength	MPa	1.8-2.3
0137A	D412	Elongation at Break	%	330-530
0137A	D412	Modulus (100%)	MPa	1.0-1.2
0249	D257	Volume Resistivity	Ohms/cm	1.0179 x10 <sup>+14</sup>
0114	D149	Dielectric Strength	Volts/mm kV/mm	434.3 17.1

<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>Defined as maximum resistance to constant stress 1 minute after sealant/adhesive application (2mm thick lap shear).

<sup>5</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*<sup>®</sup> PV-8007 Neutral Sealant is designed to provide long-term sealing and protection against moisture, environmental degradation,

mechanical and thermal shock, and vibration where a room-temperature curing product is preferred. It not only seals and protects, but its high elasticity after cure allows flexibility

in harsh conditions, suitable for photovoltaic framing and junction boxbonding. May also be used for sealing bus bar connections.

## 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 may require specific surface treatment to obtain optimum adhesion. Contact your local Dow Corning Technical support for further information.

### How to Apply

Apply a bead of *Dow Corning* PV-8007 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 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* PV-8007 Neutral Sealant will be tack free in about 15 minutes.

### Cure Time

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity), *Dow Corning* PV-8007 Neutral Sealant will cure to a depth of about 2mm. 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  
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DOW CORNING.COM, OR FROM  
YOUR DOW CORNING SALES  
APPLICATION ENGINEER, OR  
DISTRIBUTOR, OR BY CALLING  
DOW CORNING CUSTOMER  
SERVICE.**

## USABLE LIFE AND STORAGE

When stored at or below 30°C (86°F) in the original unopened containers, *Dow Corning* PV-8007 Neutral Sealant has a usable life of 12 months from the date of manufacture.

Because *Dow Corning* PV-8007 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 INFORMATION

*Dow Corning* PV-8007 Neutral Sealant is available in cartridges and pails. 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, [dowcorning.com](http://dowcorning.com) or consult your local Dow Corning representative.

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