



DOWSIL™ PV-8404 Fast Cure Adhesive

Two-part, fast room temperature cure, high-performance silicone adhesive/sealant.

Features & Benefits

- Two-part, non-corrosive, neutral, alkoxy cure adhesive/sealant
- Thixotropic
- Non self-leveling, paste consistency
- Room temperature cure with option heat acceleration
- Cures to soft, low stress elastomer
- Fast cure allows rapid handling of bonded components and a fast assembly process
- Fast and homogeneous cure in depth and early adhesion development at room temperature
- Good, durable adhesion to a wide variety of substrates including glass, aluminum and some plastics
- Excellent weathering and UV resistance
- Excellent temperature stability: -50°C to 180°C

Applications

- DOWSIL™ PV-8404 Fast Cure Adhesive is suitable for photovoltaic module frame sealing and junction box bonding

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test ¹	Property	Unit	Result
	One or Two-part		Two
	Mix Ratio by Volume		2:1
DOWSIL™ PV-8404 Fast Cure Adhesive Base: As Supplied			
CTM0176 B	Appearance		Black
CTM0022	Specific Gravity (Uncured)		1.38
CTM1094 C	Viscosity (1/s)	mPa-sec	350,000–450,000
CTM1094 C	Viscosity (10/s)	mPa-sec	150,000–200,000
DOWSIL™ PV-8404 Fast Cure Adhesive Catalyst: As Supplied			
CTM0176 B	Appearance		White paste
CTM0022	Specific Gravity (Uncured)		1.60
CTM1094 C	Viscosity (1/s)	mPa-sec	550,000–700,000
CTM1094 C	Viscosity (10/s)	mPa-sec	75,000–100,000

1. CTM: Corporate Test Method, copies of CTMs are available on request

Typical Properties (cont.)

Test ¹	Property	Unit	Result
DOWSIL™ PV-8404 Fast Cure Adhesive: As Mixed by 2:1 (Base:Catalyst) Volume Ratio			
CTM0176 B	Appearance		Black non-slump paste
CTM0099	Durometer	Shore A	40
CTM0092 AA	Snap Time (25°C, 50% R.H.)	Minutes	2-3
CTM0095 A	Tack-free Time (25°C, 50% R.H.)	Minutes	5-8
CTM0062	Vertical Flow	mm/60sec	<2
CTM0095 A	Tensile Strength	MPa	>1.5
CTM0097	Elongation at Break	%	>250
UL94	Flammability		HB (1mm) V-1 (5mm)
UL746B	Relative Thermal Index (RTI) Electrical Strength	°C	105
UL746B	Relative Thermal Index (RTI) Elongation	°C	105
UL746A	Comparative Tracking Index (CTI)		0
ASTM D0149	Dielectric Strength	kV/mm	18

Description

DOWSIL™ PV-8404 Fast Cure Adhesive is a two-part, non-self-leveling adhesive with fast cure at room temperature. The product has been developed to show good, durable adhesion to a wide range of clean substrates including plastics, metals and glass.

Processing/ Curing

Mixing

The adhesive is designed to be used in a mixing ratio between 2 parts base: 1 part catalyst by volume, (or 1.7 parts Base: 1 part Catalyst by weight). Suitable meter/mix equipment should be equipped with gear or piston metering pumps for base and catalyst, and a suitable static or a dynamic mixer.

The presence of light-colored streaks, or marbling, indicates inadequate mixing. Automated airless dispense equipment can be used to reduce or avoid the need to de-air.

Curing Conditions

The adhesive cures at room temperature and develops adhesion rapidly to glass, plastic and metal substrates.

The surfaces to be bonded should be clean, and free of any extraneous matter, dust or dirt. Adhesion is normally good to most substrates without the use of a primer, or of other surface activation methods. If desired, adhesion may be enhanced via use of flame or plasma treatment or corresponding primers on the surfaces to be bonded.

The cure and adhesion strength can also be further accelerated by the application of moderate heat up to 60°C.

Clean-Up

Extra product can be wiped up with a clean cloth before curing. If the product is cured, mechanical removal can be used to scrape off the substrate.

**Handling
Precautions**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Usable Life and
Storage**

When stored at or below 30°C, DOWSIL™ PV-8404 Fast Cure Adhesive Base and DOWSIL™ PV-8404 Fast Cure Adhesive Catalyst have a usable life of 12 months from the date of production.

Special precautions must be taken to prevent moisture from contacting this product. Containers should be kept tightly closed and head or air space minimized. Partially filled containers should be purged with dry air or other gases, such as nitrogen. The product should be stored in its original packaging with the cover tightly attached to avoid any contamination. Store in accordance with any special instructions listed on the product label. The product should be used by its Use Before date as indicated on the product label.

**Packaging
Information**

This product is available in different standard container sizes. Detailed container size information should be obtained from your nearest Dow Sales Office or Dow Distributor.

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 has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

**Disposal
Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

**Product
Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

dow.com

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

