

Silicone  
Sealants

**Dow Corning® 982 NSG  
(Non-structural Gray) Silicone  
Insulating Glass Sealant**

**FEATURES**

- Two-part silicone sealant
- Cures to form a durable, long-lasting, high-modulus, flexible, weathertight bond
- Excellent unprimed adhesion to glass and metal substrates, such as galvanized steel and aluminum
- Consistently nonslump, permitting automated application
- 12 months usable life from date of manufacture
- Noncorrosive byproducts
- Low shrinkage (<5 percent)

**COMPOSITION**

- Two-part, neutral-cure silicone

**Two-part, non-structural, neutral-cure insulating glass sealant**

**APPLICATIONS**

*Dow Corning*® 982 NSG Silicone Insulating Glass Sealant is intended for use as a secondary sealant in a dual-sealed insulating glass unit (see Figure 1). A primary seal, typically being a polyisobutylene mastic, is required to prevent moisture vapor from transmitting into the airspace of the insulating glass unit. *Dow Corning* 982 NSG Silicone Insulating Glass Sealant can bond the individual components, forming a weather-resistant unit capable of being certified to a CBA rating by an independent test laboratory in accordance with industry standards.<sup>1</sup>

**TYPICAL PROPERTIES**

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

Method	Test	Unit	Result
<b>As Supplied – Base</b>			
	Color		White
	Physical Form		Paste
CTM* 0044	Specific Gravity		1.38
ASTM C 1183	Extrusion Rate, 90 psi, 1/8" orifice	g/min	160
<b>As Supplied – Curing Agent</b>			
	Color		Gray
	Physical Form		Liquid
CTM 0044	Specific Gravity		1.22
<b>As Catalyzed – Mixed at 9:1 Base to Curing Agent (by volume), 10:1 (by weight)</b>			
	Color		Gray
CTM 0092	Working time (Snap Time)	minutes	20-40
ASTM D 2202	Flow/Sag (Slump)	inches (mm)	<0.2 (< 5.1)
<b>As Cured – 7 Days at 50 percent RH and 25°C (77°F)</b>			
ASTM C 66 1	Durometer Hardness, Shore A	points	43
ASTM D 412	Tensile Strength	psi (MPa)	228 (1.6)
ASTM D 412	Elongation	percent	219
ASTM C 794	Adhesion-in-Peel, Cohesive Failure		
	Aluminum	percent	100
	Glass	percent	100

\*CTMs (Corporate Test Methods) correspond to standard ASTM tests in most instances. Copies of CTMs are available upon request.

**DESCRIPTION**

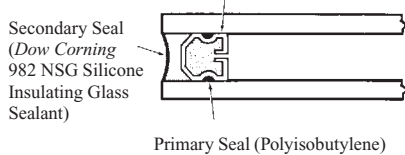
*Dow Corning* 982 NSG Silicone Insulating Glass Sealant is a two-part silicone sealant. As supplied, the base component, *Dow Corning* 982 Silicone Insulating Glass Sealant –

Base, is a smooth, white paste. The curing agent component, *Dow Corning* 982 NSG Curing Agent, is a gray pourable liquid. Once mixed at the proper base- to-curing agent ratio, the material cures to a durable, high-modulus, flexible silicone seal that is chemically stable.

<sup>1</sup>Per ASTM E 774, Standard Specification for Sealed Insulating Glass Units.

## Figure 1: Dual-seal Type

Aluminum or galvanized steel spacer filled with desiccant; corners brazed, soldered, bent, or butyl injected corner keys



*Dow Corning* 982 Silicone Insulating Glass Sealant – Base is available in white. *Dow Corning* 982 NSG Curing Agent is available in gray.

## HOW TO USE

### Design Considerations

Insulating glass units intended for conventional dry glazing or residential window application should be designed with the secondary sealant dimensions in accordance with the “Sealant Manufacturers Minimum Sealant Dimensions and Placement Survey,” distributed by SIGMA, 01 July 1989.

Adhesion and compatibility should be evaluated before sealant use. If requested, *Dow Corning* may provide assistance in performing adhesion testing to coated glass<sup>2</sup> or spacer surfaces before using *Dow Corning* 982 NSG Silicone Insulating Glass Sealant in production quantities.

### Surface Preparation

Before using this product, clean all surfaces, removing all foreign matter

and contaminants, such as grease, oil, dust, water, frost, surface dirt, old sealants or glazing compounds and protective coatings.

Clean all metal, glass and plastic surfaces by mechanical or solvent procedures. Always wipe solvents on and off with clean, oil- and lint-free cloths.<sup>3</sup>

### Mixing

To obtain ultimate physical properties, *Dow Corning* 982 Silicone Insulating Glass Sealant – Base and *Dow Corning* 982 NSG Curing Agent should be thoroughly mixed using an airless mixing system. As a custom feature for the customer, the cure rate may be adjusted by changing the base-to-curing agent mix ratio from 9:1 to 10.5:1 by volume (10:1 to 12:1 by weight). Sealant physical properties are not significantly changed over this range. Changes in the temperature and humidity of the environment, however, will affect snap time.

*Dow Corning* 982 NSG Silicone Insulating Glass Sealant is compatible with existing commercial two-part silicone dispensing equipment. Neither hand-mixing nor mechanical mixing is satisfactory due to incorporation of air resulting in altered physical properties.

Because of its reactivity with atmospheric moisture, *Dow Corning* 982 NSG Curing Agent should not be exposed to air for prolonged periods.

During shutdown of mixing equipment, dispensing and mixing lines should be purged with uncatalyzed base to minimize sealant build-up.

Lot matching of *Dow Corning* 982 Silicone Insulating Glass Sealant – Base and *Dow Corning* 982 NSG Curing Agent is NOT required.

### Testing

*Dow Corning* recommends several in-house quality control tests to ensure optimum sealant performance. These tests include:

- Butterfly test to ensure proper mix
- Snap time or cure test to ensure expected sealant cure rate at proper mix ratio
- Tab adhesion to ensure proper sealant adhesion to production surfaces

These tests should be performed every time lots of base or curing agent are changed, or every time the production line is started. Specific procedures for these recommended tests can be supplied by *Dow Corning*.

### Tooling

To obtain optimum adhesion, joints should be tooled immediately after sealant application to ensure complete substrate contact.

**HANDLING PRECAUTIONS**  
PRODUCT SAFETY INFORMATION  
REQUIRED FOR SAFE USE IS NOT  
INCLUDED IN THIS DOCUMENT.  
BEFORE HANDLING, READ

<sup>2</sup>Some coatings may require edge deletion for optimal long-term system performance. Contact your glass supplier for recommendations.

<sup>3</sup>Follow solvent manufacturer's recommended safe handling instructions and applicable federal, state and local laws.

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, OR DISTRIBUTOR, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION.

## **USABLE LIFE AND STORAGE**

When stored in cool, dry conditions below 32°C (90°F) in the original unopened containers, *Dow Corning* 982 Silicone Insulating Glass Sealant – Base and *Dow Corning* 982 NSG Curing Agent have a usable life of 12 months from date of manufacture. Refer to product packaging for “Use By” date.

## **PACKAGING**

*Dow Corning* 982 Silicone Insulating Glass Sealant – Base and *Dow Corning* 982 NSG Curing Agent are sold as separate components, allowing manufacturers to purchase and create their own kits.

*Dow Corning* 982 Silicone Insulating Glass Sealant – Base is available in drum quantities.

*Dow Corning* 982 NSG Curing Agent is available in pail and drum quantities.

## **LIMITATIONS**

*Dow Corning* 982 NSG Silicone Insulating Glass Sealant should not be applied:

- As a primary or single seal in an insulating glass unit
- To insulating glass units that will be used in structural glazing applications
- To building materials that bleed oils, plasticizers or solvents – materials such as impregnated wood, oil-based caulks, green or partially vulcanized rubber gaskets and tapes
- In below-grade applications
- In contact with or exposed to sealants that liberate acetic acid
- In continuous water immersion

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.

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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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**DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

