Product Information
Construction

DOW CORNING

Dow Corning® 982 Silicone Insulating Glass Sealant

FEATURES

- Cures to form a durable, high-modulus, weather tight seal
- Excellent unprimed adhesion to a wide range of coated glasses and aluminium and steel spacers
- Structural capability as secondary sealant for insulating glass units used in structural glazing[1]
- Non-slump formulation suitable for manual and automated glazing
- Fast Curing
- Neutral cure
- Excellent temperature stability from -50ºC to 150ºC
- Outstanding resistance to ozone and UV radiation
- 12 month shelf life from date of manufacture
- Low shrinkage (<5 percent)

COMPOSITION

- Two-part silicone sealant

[1]For IG units used in structural glazing applications, it is the responsibility of the insulating glass manufacturer to determine the amount of *Dow Corning* 982 Silicone Insulating Glass Sealant to be applied and the configuration in their application.
[2]Per ASTM E 2190, Specification for Insulating Glass Unit Performance and Evaluation. It is the responsibility of the insulating glass manufacturer to determine the suitability of this sealant in their proposed application.

APPLICATIONS

- *Dow Corning*® 982 Silicon Insulating Glass sealant is intended for use as a secondary sealant in dual-sealed insulating glass units (see Figure 1). A primary seal of polyisobutylene is required to prevent moisture vapor transmission into the airspace in the insulating glass unit. *Dow Corning* 982 Silicon Insulating Glass Sealant can bond the individual components of the insulating glass unit to form a weather-resistant unit capable of being certified for industry standards. Conformance can be confirmed by an independent test laboratory in accordance with industry standard.[2]
- *Dow Corning* 982 Silicone Insulating Glass Sealant can also be used as the secondary edge seal in insulating glass units that will be structurally glazed.

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.

Test	Property	Unit	Result
As supplied – *Dow Corning* 982 Silicone Insulating Glass Sealant Base			
	Color		White
	Physical Form		Paste
ASTM D 1475	Specific Gravity		1.36
ASTM C 1183	Extrusion Rate,90psi,1/8”	g/min	280
	VOC Content[1]	g/l	<4
As supplied – *Dow Corning* 982 Structural Glazing Sealant, Black Curing Agent			
	Color		Black
	Physical Form		Paste
ASTM D 1475	Specific Gravity		1.07
	VOC Content[1]	g/l	<150
As supplied – *Dow Corning* 982 Structural Glazing Sealant, Gray Curing Agent			
	Color		Gray
	Physical Form		Viscous Liquid
ASTM D 1475	Specific Gravity		1.02
	VOC Content[1]	g/l	<130
As Catalyzed – Mixed at 12:1 Base to Curing Agent by weight			
	Snap Time	min	30-50
ASTM D 2202	Flow/Sag (Slump)	mm (inches)	<2.5(<0.1)
As cured – 7 days at room temperature			
ASTM C 661	Durometer Hardness	Shore A	42
ASTM C 794	Adhesion-in-peel, Cohesive Failure		
	Aluminum	%	100
	Glass	%	100
	Strength	N/m (ppi)	5,200 (30)
ASTM C 1135	Tensile Strength (at 10%)	Mpa (psi)	0.15 (22)
	Tensile Strength, Ultimate	Mpa (psi)	1.0 (150)
	Elongation, Ultimate	%	150

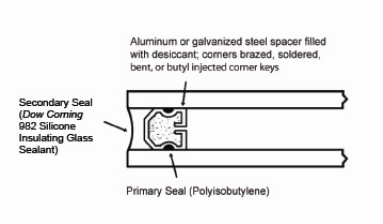
[1]Based on South Coast Air Quality Management District of California maximum VOC is listed both inclusive and exclusive of water and exempt compounds. For a VOC data sheet for a specific sealant color, please send your request to product.inquiry@dowcorning.com.

DESCRIPTION

Dow Corning 982 Silicone Insulating Glass Sealant is a two-part silicone formulation. As supplied, the base is a smooth, white paste and the curing agent is available in black or gray. Once mixed at the proper base-to-curing agent ratio the material cures to a durable, high-modulus, weather-resistant silicone seal.

Dow Corning 982 Silicone Insulating Glass Sealant's unique weatherability enables it to retain design properties even after years of exposure. Tensile strength and adhesion[1] do not change significantly with aging or exposure to weather; seals remain weatherproof.

Figure 1: **Dual-Seal Type**



HOW TO USE

Insulating glass units intended for structural silicone glazing applications should contain secondary seal depths at determined by industry-accepted standards, such as the trapezoidal load distribution rule and load-sharing principles. Summaries of these standards are available from Dow Corning Insulating Glass Technical Manual. Adhesion and compatibility should be evaluated before sealant use.

If requested, Dow Corning may provide assistance in performing adhesion testing to coated glass[1] and spacer surfaces before using *Dow Corning* 982 Silicone Insulating Glass Sealant in production quantities.

Surface Preparation

Before using this product, clean all metal, glass and plastic surfaces with solvent such as isopropanol and clean, oil-and lint-free cloths. Glass may also be cleaned in a suitable automatic washing machine.[2]

Mixing

To obtain ultimate physical properties, *Dow Corning* 982 Silicone Insulating Glass Sealant-Base and Curing agent should be thoroughly mixed using an airless mixing system. *Dow Corning* 982 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. *Dow Corning* 982 Silicone Insulating Glass Sealant is supplied as two separate components.

The cure rate may be adjusted by changing the base-to-curing agent mix ratio from 8:1 to 10:1 by volume; sealant physical properties are not significantly changed over range. Changes in the ambient temperature and humidity, however, will affect the snap time. See Table I for ratio weight volumetric equivalents.

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 the sealant mix ratio is within the correct range
- Tab adhesion test 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. Dow Corning can supply the procedures for the tests recommended.

Tooling

The joints should be tooled immediately after sealant application to ensure complete substrate contact, which is a requirement for optimum adhesion.

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 WEB SITE AT DOWCORNING.COM, OR FROM YOUR

Table I: Typical Weight Equivalents of Volumetric Mixing Ratios

	Equivalent Weight Ratio	
Volume Ratio	**Black Curing Agent**	**Gray Curing Agent**
8:1 to 10:1	10:1 to 13:1	10.5:1 to 13.5:1

Standard pump ratios are normally set at 9:1 by volume, check with pump manufacturer.

[1]Some coating may require edge deletion for optimal long term system performance. Contact your glass supplier for recommendations.

[2]Follow solvent manufacturer's recommended safe handling instruction and applicable federal, state and local laws.

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DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

Dow Corning 982 Silicone Insulating Glass Sealant should be stored in airtight, closed containers. When stored at or below 30°C(86°F)-base, 27°C (80°F)-curing agent, both the base and curing agent have a shelf life of 12 months from date of manufacture. Refer to product packaging for "Use By" date.

PACKAGING INFORMATION

Dow Corning 982 Silicone Insulating Glass Sealant curing agent and *Dow Corning* 982 Silicone Insulating Glass Sealant base are packaged separately.

Dow Corning 982 Silicone Insulating Glass Sealant base is available in 250 kg (net weight) straight-sided drum.

Dow Corning 982 Silicone Insulating Glass Sealant curing agent is available in pails, 19 kg (net weight) for black or 18 kg (net weight) for gray.

Lot matching of *Dow Corning* 993N Structural Glazing Sealant catalyst and base is NOT required.

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 Web site, 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 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.

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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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