

Construction **DOW CORNING® 939** Silicone Insulating Glass Sealant

a two-part silicone sealant

APPLICATIONS

- ◆ Residential Insulating Glass Secondary Sealing

FEATURES

- Excellent unprimed adhesion to glass
- Consistently nonslump, permitting automated glazing
- Excellent shelf life stability
- Adjustable cure rate ranging from 30 to 50 minutes (as measured by snap time)
- Noncorrosive by-products

TYPICAL PROPERTIES

Specifications writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales representative prior to writing specifications on this product

CTM*	ASTM*	Property	Unit	Value
These values are not intended for use in preparing specification				
As supplied - Base				
		Physical Form		White paste
		Specific Gravity		1.50
As supplied - Curing Agent				
		Physical Form		Black paste
		Specific Gravity		
As Catalyzed (mixed at 13:1 base- to curing agent ratio by weight)				
		Color		Black
		Working time, minutes		40
		Corrosiveness		Neutral cure
		Consistency		Nonslumping
As cured - 3Days at 25°C and 50percent Relative Humidity				
		JIS K 6249 Specific Gravity		1.50
		JIS K 6249 Durometer Hardness, Shore A		52
		JIS K 6249 Tensile Strength, N/mm ²		2.7
		JIS K 6249 Elongation, percent		250
		Tab Adhesion Test, cohesive Failure, %		
		Glass		100
		Aluminum		100

* CTM : Corporate Test Method, copies of CTM's are available on request.
ASTM : American Society for Testing and Materials.

DESCRIPTION

Dow Corning®939 Silicone Insulating Glass Sealant is a two-part silicone sealant. As supplied, the base component, Dow Corning®939 Silicone Insulating Glass Sealant-Base, is a smooth, white paste. The curing agent, Dow Corning®939 Silicone Sealant-Curing agent, is a black paste. Once mixed at the

proper base-to-curing agent ratio, the material cures to a durable, high-modulus, and flexible silicone seal that is chemically stable.

HOW TO USE

Dow Corning®939 Silicone Insulating Glass Sealant is intended for use as a secondary sealant in a dual-sealed insulating glass unit. A primary seal, typically being a polyisobutylene mastic, is required to prevent moisture vapor from transmitting into the airspace of the insulating glass unit

HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. 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 FROM YOUR LOCAL DOW CORNING SALES REPRESENTATIVE.

USABLE LIFE AND STORAGE

When stored in closed, airtight containers at or below 27°C, Dow Corning®939 Silicone Insulating Glass Sealant-Base and Dow Corning®939 Silicone Insulating Glass Sealant-Curing agent will have a shelf life 12 months from date of manufacture. "Use by" dates are clearly marked on the product label.

PACKAGING

Dow Corning®939 Silicone Insulating Glass Sealant-Base and Dow Corning®939 Silicone Insulating Glass Sealant-Curing agent are sold as separate components, allowing manufacturers to purchase and create their own "kits". The base component is available in 250 kg, straight-sided drums. The curing agent is supplied separately in both 9kg pails.

LIMITATIONS

Dow Corning®939 Silicone Insulating Glass Sealant should not be applied:

- As a primary or single seal in an insulating glass unit
- To building materials that bleed oils, plasticizers or solvents-materials such as a impregnated wood, oil-based caulks, green or partially vulcanized rubber gaskets and tapes
- In Insulating glass units intended for use in structural silicone glazing applications
- On food contact surfaces - this

product does not comply with FDA food additive regulations

- Where it will be in continuous immersion in water

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

INSTALLATION

Surface Preparation: Before using this product, clean all surfaces, removing all foreign matter and water, frost, surface dirt, old sealants or glazing compounds and protective coatings.

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

Mixing: To obtain ultimate physical properties, Dow Corning®939 Silicone Insulating Glass Sealant-Base and Dow Corning®939 Silicone Insulating Glass Sealant-Curing Agent should be thoroughly mixed using an airless mixing system. Dow Corning®939 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®939 Silicone Insulating Glass Sealant-Curing Agent should not be exposed to air for prolonged periods of time. During shutdown of mixing equipment, it is recommended that the dispensing and mixing lines be purged with uncatalyzed base. This retards sealant buildup.

Lot matching of Dow Corning®939 Silicone Insulating Glass Sealant-Base and Dow Corning®939 Silicone Insulating Glass Sealant-Curing Agent is NOT required.

The cure rate of Dow Corning®939 Silicone Insulating Glass Sealant may be adjusted by changing the base-to-curing agent mix ratio from 12:1 to 14:1 by weight. Sealant physical properties are not significantly changed over this range.

A "snap test" or cure test can be performed to ensure the sealant is being mixed at the proper mix ratio (see Figure 2).

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 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. 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.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Dow Corning representative.

LIMITED WARRANTY - 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. 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. Dow Corning specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Dow Corning provides you with a specific, duly signed endorsement of fitness for use, Dow Corning disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.

Figure 1: Cure Rate-Snap Time vs. Mix Ratio at 25% and 50% relative humidity.



