FEATURES
- Two-part, neutral cure, RTV silicone sealant
- Cures to form a durable, long-lasting, high-modulus, flexible, weathertight bond
- Structural Secondary Sealant capability
- Unprimed adhesion to glass and metal substrates, such as stainless steel and aluminum
- Non slump, permitting automated glazing
- 12 month shelf life from date of manufacture
- Noncorrosive byproducts
- Low shrinkage (<5 percent)
- Meets ASTM C-1369 Specification for Structurally Glazed Insulating Glass Units

APPLICATIONS
- Dow Corning® 982-FS Insulating Glass sealant is intended for use as a secondary sealant in dual-sealed insulating glass (IG) units (see Figure 1). A primary seal, typically polyisobutylene mastic (PIB), is required to prevent moisture vapor from transmitting into the airspace as well as retain gasses, such as argon, in the IG unit. When used in IG unit fabrication, Dow Corning 982-FS Insulating Glass Sealant bonds to typical IG substrates and completes a weather-resistant unit capable of meeting the ASTM E-2190 specification which is a requirement of NRFC 706 certification.
- Can be used as a secondary insulating glass sealant for structurally attached IG units. In the event that the sealant is used in this application it is the IG manufacturers’ responsibility to ensure suitability and conduct the structural bite calculations using industry accepted load sharing methods.

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.

<table>
<thead>
<tr>
<th>Method</th>
<th>Test</th>
<th>Unit</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Supplied – Dow Corning® 982-FS Insulating Glass Sealant - Base</td>
<td>Color</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical Form</td>
<td>Paste</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ASTM D 1475</td>
<td>Specific Gravity</td>
<td>1.36</td>
</tr>
<tr>
<td>As Supplied – Dow Corning® 982-FS Black Curing Agent</td>
<td>Color</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical Form</td>
<td>Pourable liquid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ASTM D 1475</td>
<td>Specific Gravity</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC Content</td>
<td>149</td>
</tr>
<tr>
<td>As Supplied – Dow Corning® 982-FS Gray Curing Agent</td>
<td>Color</td>
<td>Gray</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical Form</td>
<td>Pourable liquid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ASTM D 1475</td>
<td>Specific Gravity</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC Content</td>
<td>147</td>
</tr>
<tr>
<td>As Catalyzed – Mixed at 9:1 Base-to-Curing Agent by Volume</td>
<td>Working Time</td>
<td>minutes</td>
<td>10-25</td>
</tr>
<tr>
<td></td>
<td>Flow/Sag (Slump)</td>
<td>inches (mm)</td>
<td>&lt;0.2 (&lt;5.1)</td>
</tr>
<tr>
<td>As Cured – 7 Days at 25°C (77°F) and 50 percent Relative Humidity</td>
<td>Durometer Hardness, Type A</td>
<td>points</td>
<td>35-45</td>
</tr>
<tr>
<td></td>
<td>Tensile Strength</td>
<td>psi (MPA)</td>
<td>250-280 (1.73-1.92)</td>
</tr>
<tr>
<td></td>
<td>Elongation</td>
<td>percent</td>
<td>250-300</td>
</tr>
</tbody>
</table>
**DESCRIPTION**

*Dow Corning* 982-FS Insulating Glass Sealant is a two-part silicone formulation. As supplied, the base is a smooth, white paste. The curing agent is available in black or gray and is a pourable liquid. Once catalyzed, the material cures to a high modulus, silicone rubber that is intended for IG applications.

*Dow Corning* 982-FS Insulating Glass Sealant features:

- Unprimed adhesion on most common IG substrates
- A non-corrosive by-product
- Excellent weatherability, durability and recovery after repeated extension and compression up to 12½%.

Since *Dow Corning* 982-FS Insulating Glass Sealant is supplied in 2 components, a feature for the customer is the ability to adjust the cure rate slightly by changing the base to curing agent mix ratio between 9:1 and 10.5:1 by volume. Sealant physical properties are not significantly altered over this range. Environmental changes such as temperature and humidity will affect product working time. Colder temperatures will slow cure rate and adhesion development.

**HOW TO USE**

**Design Considerations**

Insulating glass units intended for conventional dry glazing or residential window applications should be designed with the secondary sealant dimensions in accordance with the “Sealant Manufacturers Minimum Sealant Dimensions and Placement Survey,” distributed by IGMA, T B-1201-89(05).²

Insulating glass units intended for structural silicone glazing applications should contain secondary seal depths as determined by industry-accepted standards, such as the trapezoidal load distribution rule and load-sharing principles.²

Adhesion and compatibility should be evaluated prior to sealant use. If requested, Dow Corning may provide assistance in performing adhesion testing to coated glass or spacer surfaces before using *Dow Corning* 982-FS Insulating Glass Sealant.³

**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 methods. Always wipe solvents on and off with clean oil- and lint-free cloths.⁴

**Mixing**

To obtain ultimate physical properties, *Dow Corning* 982 Silicone Insulating Glass Sealant—Base and *Dow Corning* 2-Part Curing Agent should be thoroughly mixed using automated two part mixing and dispensing equipment. *Dow Corning* 982 Silicone Insulating Glass Sealant is compatible with commercially available equipment. Mixing by hand or utilizing small mechanical mixing devices will not produce satisfactory results.

Because of its reactivity with atmospheric moisture, *Dow Corning* 2-Part Curing Agent should not be exposed to air for prolonged periods.

During shutdown of mixing equipment, dispensing and mixing lines require purging with uncatalyzed base to minimize cured sealant buildup in lines and static mixing elements.

Lot matching of base and catalyst containers is not required.

**Table 1: Width Equivalents of Volumetric Mixing Ratios**

<table>
<thead>
<tr>
<th>Volume Ratio</th>
<th>Curing Agent</th>
<th>Black Curing Agent Gray</th>
<th>Equivalent Weight Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:1 to 10.5:1</td>
<td>12:1 to 14:1</td>
<td>10:1 to 11.7:1</td>
<td></td>
</tr>
</tbody>
</table>
Testing
Dow Corning recommends several in-house quality control tests to ensure optimum sealant performance. These tests include:
- Butterfly test to ensure proper mixing
- 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 at the start of every shift or production run. Specific procedures for these recommended tests are available in the Dow Corning Insulating Glass Technical Manual.

Tooling
To obtain optimum adhesion, joints should be toolled immediately after sealant application.

Questions about the use of Dow Corning 982-FS Insulating Glass Sealant can be answered by calling the Dow Corning Business Center.

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

USABLE LIFE AND STORAGE
Dow Corning 982-FS Insulating Glass Sealant should be stored in closed, airtight containers at or below 27°C (80°F). Both the base and the 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-FS Insulating Glass Sealant – Base and Dow Corning 2-Part Curing Agent are packaged separately.

Dow Corning 982-FS Insulating Glass Sealant – Base is available in 48.5 gal (183.8L) lined, right-sided drums or fiber packs.
Dow Corning 2-Part Curing Agent is available in 39.6-lb (18-kg) pails for black or 48.4-lb (22 kg) for gray.

LIMITATIONS
Dow Corning 982-FS 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 impregnated wood, oil-based caulks, green or partially vulcanized rubber gaskets and tapes
- On food contact surfaces – this product does not comply with FDA food additive regulations
- In below-grade or continuous water immersion applications.

Because of a potential for incompatibility, Dow Corning 982-FS Insulating Glass Sealant should not come in contact with, nor be exposed to, sealants that liberate acetic acid.

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.

Dow Corning’s sole warranty is that our products will meet the 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 will warrant that Dow Corning 982-FS Insulating Glass Sealant will maintain its flexibility and adhesion to glass and metal spacers in insulating glass units for a period of 10 years if the insulating glass manufacturer uses the product under the following conditions:

- Within its stated shelf life
• With compatible substrates
• With a base-to-curing agent mix ratio between 9:1 and 10.5:1 by volume
• According to Dow Corning’s recommendations for application and in accordance with Dow Corning’s recommended quality control procedures
• In an insulating glass unit that has been tested and has attained NFRC 706 certification

Warranty Limitations:
This warranty specifically excludes failure of the sealant due to:
• Natural causes such as lightning, earthquake, hurricane, tornado, fire, etc.
• Stress on the sealant which exceeds 20 psi
• Movement of the structure resulting in stresses on the sealant that exceed Dow Corning’s published specifications for elongation for the sealant, whether due to structural settlement, design error fabrication error or construction error
• Continuous immersion in water
• Disintegration of the underlying substrates such as Low-E coating corrosion, glass coating delamination or spacer corrosion
• Mechanical damage to the sealant caused by individuals, tools or other outside agents
• Changes in the appearance of the sealant from the accumulation of dirt or other contaminants deposited on the sealant from the atmosphere

Warranty Remedies:
In the event of a claim under this warranty, the insulating glass manufacturer must notify Dow Corning Corporation in writing within 30 days of the occurrence of the failure.

Dow Corning’s sole liability shall be to furnish sufficient replacement material or refund of the purchase price of all material shown to be other than as warranted. Any labor or other costs associated with the repairs are the responsibility of the insulating glass manufacturer.

DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

We help you invent the future.™

dowcorning.com