**Insulating Glass Sealant**

**SEALANT-FC-312**

SEALANT-FC-312 is a two-part silicone sealant for a secondary sealant in both structural and non-structural insulating glass units. It is a fast-cure neutral curing silicone sealant with unprimed adhesion to a wide range of coated and annealed glass. The sealant cures to become a high-modulus silicone rubber suitable for insulating glass application. This sealant contributes to the superior productivity and high reliability.

This sealant meets the requirement of EN 1279 part 4.

* For IG units, it is the responsibility of the glass manufacturer to determine the joint configuration for the units.

### 1 Features
- Two-part, neutral-cure RTV* silicone sealant
- Can be used with an airless mixing system, when mixed the material has very high workability even if low temperature environments
- Standard mixing ratio: adjusted to 10 [BASE]: 1 [CAT] by volume
- Fast cure with excellent adhesion to common glass type
- Superior resistance to extremes in weather, temperature change, moisture, ozone, and ultraviolet rays

* RTV stands for "room temperature vulcanizing" which means that this material can be cured at room temperature.

### 2 Applications

As a secondary sealant for insulating glass unit manufacture in factory

### 3 Specifications

- UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials
- ASTM C1184\(^*1\)
- ASTM C920\(^*2\)
- KS F 4910\(^*3\) G-20HM

\(^*1\) Standard Specification for Structural Silicone Sealants
\(^*2\) Standard Specification for Elastomeric Joint Sealants
\(^*3\) Sealants for sealing and glazing in buildings

### 4 Packaging

- [BASE] SEALANT-FC-312: 260 kg drum
- [CAT] CAT-FC-312: 20 kg pail

### 5 General properties

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BASE</th>
<th>CAT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before mixing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistency</td>
<td>Paste</td>
<td>Paste</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>Mixing ratio by volume (weight)</td>
<td>100 (100)</td>
<td>10 (8.0)</td>
</tr>
<tr>
<td><strong>After mixing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snap time at 23°C min</td>
<td>30 to 60</td>
<td></td>
</tr>
<tr>
<td>After cured - After 7 days at 23°C/50%RH</td>
<td>Reference Test</td>
<td></td>
</tr>
<tr>
<td>Consistency</td>
<td>Elastic</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Density at 23°C g/cm(^3)</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>Hardness Shore A</td>
<td>ASTM D2240</td>
<td>43</td>
</tr>
<tr>
<td>After cured - After 21 days at 23°C/50%RH</td>
<td>Reference Test</td>
<td></td>
</tr>
<tr>
<td>10% Tensile stress MPa</td>
<td>ASTM C1135</td>
<td>0.2</td>
</tr>
<tr>
<td>Maximum tensile stress MPa</td>
<td></td>
<td>1.2</td>
</tr>
</tbody>
</table>

(Not specified values)
**SEALANT-FC-312**

**6 General instruction for use**

1) Adhesion and compatibility must be tested before the commencement of any sealant application.

2) Before applying the sealants, ensure that all the areas to be sealed are clean and dry.

3) SEALANT-FC-312 should be mixed and dispensed with airless, metered pumping equipment. Hand mixing of the base and catalyst is not approved.

4) The applicator must conduct A. Butterfly Test to ensure proper mixing B. Snap Time Test to ensure that the mixed material will cure C. Adhesion Test to ensure proper adhesion to the substrate surface. For the test detail, please refer to the latest Functional Sealant Technical Manual.

5) The sealant should be tooled immediately after the application.

6) All quality control test results must be logged and archived.

7) The Shin-Etsu Sales Department is available for specific advice.

**7 Limitations**

1) SEALANT-FC-312 is not approved for structural glazing applications.

2) SEALANT-FC-312 must not be used in food, medical or pharmaceutical applications.

3) The contents of this catalog are believed to be correct, but project conditions regarding actual application and use of Shin-Etsu sealant are beyond Shin-Etsu's control. Therefore it is the users responsibility to confirm the product meets the requirements of the application.

4) Shin-Etsu warrants only the sealant will confirm to Shin-Etsu's product specifications at the time of shipment, and makes no further warranties in respect of the sealant. Warranty remedy for such failure is limited to refund of purchase price or replacement of product. If applicators need extended warranty for performance of sealants, please contact the Shin-Etsu Sales Department in advance of the project inception.

**8 Storage conditions**

Temperature [BASE]: at or below 30°C, [CAT]: at or below 27°C

Seal container tightly and store in a cool, dark place (out of direct sunlight) with good ventilation. Keep away from heat and flame.

**9 Shelf life**

12 months after production date under the above storage conditions in the original unopened container

**10 Safety and hygiene**

1) Uncured SEALANT-FC-312 may cause skin irritation. When handling the products, take care to avoid contact with the skin and mucous membranes by wearing protective glasses and protective gloves. In case of skin contact, immediately wipe off with dry cloth and then flush thoroughly with running water.

When using, be careful not to rub eyes with hands. In case of accidental eye contact, flush immediately with plenty of clean water for at least 15 minutes and then seek medical attention.

Contact lens wearers must take special care. If the products get into the eye, the contact lens may become stuck to the eye.

2) Be sure to provide adequate ventilation when using the product. During curing, a small amount of Methanol gas is gradually generated. If you become uncomfortable with inhaling vapors, move to an area with fresh air immediately.

3) Keep out of reach of children.

4) Please read the Safety Data Sheets (SDS) before use. SDS can be obtained from our Sales Department.

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**Shin-Etsu Chemical Co., Ltd.**

**Silicone Division Sales and Marketing Department**

6-1, Ohtemachi 2-chome, Chiyoda-ku, Tokyo, Japan

Phone: +81-(0)-3-3246-5153 Fax: +81-(0)-3-3246-5362

**Shin-Etsu Silicone Korea Co., Ltd.**

GT Tower 15F, 411, Seoco-daero, Seoco-gu, Seoul 06615, Korea

Phone: +82-(0)-2-590-2500 Fax: +82-(0)-2-590-2501

**Shin-Etsu Silicone International Trading (Shanghai) Co., Ltd.**

29F Junyao International Plaza, No.789, Zhao Jia Bang Road, Shanghai 200032, China

Phone: +86-(0)-21-6443-5550 Fax: +86-(0)-21-6443-5868

**Shin-Etsu Silicones (Thailand) Ltd.**

7th Floor, Harindhorn Tower, 54 North Sathorn Road, Bangkok 10500, Thailand

Phone: +66-(0)-2-632-2941 Fax: +66-(0)-2-632-2945

**Shin-Etsu Singapore Pte. Ltd.**

4 Shenton Way, #10-03/06, SGX Centre II, Singapore 068807

Phone: +65-6743-7277 Fax: +65-6743-7477

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