

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 in 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

5 General properties

Parameter	Product name	SEALANT-FC-312	
		BASE	CAT
Before mixing		BASE	CAT
Consistency		Paste	Paste
Color		White	Black
Mixing ratio by volume (weight)		100 (100)	10 (7.8)
After mixing			
Snap time at 23°C	min	30 to 60	
After cured - After 7 days at 23°C/50%RH	Reference Test		
Consistency		Elastic	
Color		Black	
Density at 23°C	g/cm ³	1.4	
Hardness Shore A	ASTM D2240	43	
After cured - After 21 days at 23°C/50%RH	Reference Test		
10% Tensile stress	MPa	0.2	
Maximum tensile stress	MPa	1.2	

(Not specified values)



Container image

4 Packaging

[BASE] SEALANT-FC-312: 260 kg drum

[CAT] CAT-FC-312: 20 kg pail



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 or specific advise.

7 Limitations

- 1) SEALANT-FC-312 remains suitable for insulated glazing applications related to structural glazing but is not approved as a replacement for SEALANT-FC-295SG.
- 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

[BASE]: 18 months after production date, [CAT]: 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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