



IGS3713

Insulating Glass Secondary Sealant

Product Description

IGS3713 is a single-component, high strength, neutral cure silicone sealant which is an excellent candidate to consider for use as a secondary seal in glass fabrication. IGS3713 is supplied as a paste and upon dispensing, reacts with atmospheric moisture to produce a durable, formed-in-place silicone rubber seal.

Key Features and Typical Benefits

Performance

- **Silicone Durability** - Exhibits excellent long-term resistance to natural weathering, including: ultraviolet radiation, high and low temperatures, rain and snow - with negligible change in elasticity.
- **High Modulus** - Holds the glass and spacer assembly together while limiting movement to reduce pumping action on IG unit primary seals.
- **Thermal Stability** - Once cured, material properties remain relatively unchanged and fully elastic over a range of 40°F (-40°C) to 250°F (121°C) and up to 350°F (177°C) under intermittent short-term exposure.
- **Structural Applications** - Meets Requirements of ASTM C1369, Standard Specification for Secondary Edge Sealants for Structurally Insulating Glass Units.

Application

- **Primerless Adhesion** - Bonds to many substrates and finishes used in the manufacture of insulating glass including: glass, mill finish and anodized aluminum, stainless steel and other warm-edge type spacers.
- **High Performance Rheological Characteristics** - Can lead to reduced equipment wear, and excellent groove filling between the glass and spacer.
- **Low Sag or Slump** - Low flow under static conditions minimizes or eliminates IG unit corner bulges.
- **Fast Cure** - Cure speed may improve productivity.

Packaging

IGS3713 is available in 5 gallon plastic pails containing 60 lbs./ 27.2 Kg, (4.7 gals. / 18.1 L) and 55 gallon steel drums containing 540 lbs./245.1 Kg (42.5 gals./164.4 L).

Colors

IGS3713 is available in black.



Black



Typical Physical Properties

Typical property values of IGS3713 insulating glass secondary sealant as supplied and cured are set forth in the tables below. Typical product data values should not be used as specifications.

Typical Properties – Uncured

Property	Value ⁽¹⁾	Test Method
Color	Black	
Polymer	100% Silicone	
Consistency	Paste	
Specific Gravity	1.52	
VOC	37 g/l	
Tooling Time	20 minutes	
Tack Free Time	30 minutes	ASTM C679
Application Rate	200 grams/minute	MPM E-56
Sag/Slump	0.1" (2.5 mm) max.	ASTM D2202

Typical Properties – Cured

Property	Value ⁽¹⁾	Test Method
Hardness, Durometer (Type A Indentor)	35 ±3	ASTM D2240
Ultimate Tensile Strength	300 psi (2.31 Mpa)	ASTM D412
Ultimate Elongation	366%	ASTM D412
Shear Strength	120 psi (0.83 MPa)	ASTM C961
Peel Strength	30-40 pli	ASTM C794
Service Temperature Range	-40°F to +250°F (-40°C to +121°C)	
Cure Time (1/8" or 3mm deep section) @ 75° (24°C) 50%	8 hours	
Cure Time (1/4" or 6mm deep section) @ 75° (24°C) 50%	24 hours	

(1) Typical properties are average data and are not to be used as or to develop specifications.

Installation

Surface Preparation

SPECIFIC SUBSTRATE TESTING SHOULD BE CONDUCTED BEFORE USE TO DETERMINE IF ADHESION IS SATISFACTORY.

IGS3713 has been formulated to develop adhesion to many materials commonly used in manufacturing insulating glass units including: glass, steel and aluminum.

Foreign materials, such as dirt, atmospheric and desiccant dust, water, machine oils, waxes on painted surfaces, and salt deposition on anodized surfaces can and may interfere with development of adhesion.

It is recommended that the user conduct periodic quality control testing on their substrates and sealant during manufacturing operations to ensure that adhesion requirements are being met.

Sealant Application

- Apply sealant in a continuous operation, in one direction, applying a positive pressure adequate to properly fill and seal the joint's entire width and depth.
- Tool or strike the sealant as necessary with a suitable tool, applying light pressure to spread the material against the spacer and the glass surfaces, to ensure a void-free application.
- Excess sealant may be cleaned from glass, metal and other smooth non-porous surfaces while still uncured by scraping with a razor blade or wiping with dry rags or paper towels.
- Dry tooling is recommended.
- Sealant application is not recommended when the temperature is below 40°F (4°C) or if frost or moisture is present on the surfaces to be sealed.
- IGS3713 works best when applied to surfaces below 113°F (45°C).
- The cure rate of IGS3713 is dependent upon temperature and the availability of atmospheric moisture. At a lower temperature and/or humidity, the cure time will increase. At higher temperature and/or humidity cure times will decrease. Near-confined spaces that prevent sealant contact with a free flow of air containing moisture can also slow the cure rate. Curing will occur only from surfaces that have contact with atmospheric moisture.

Method of Application

IGS3713 is easily dispensed directly from 5 gallon pails and 55 gallon drums with commercially available, fully enclosed, pumping systems to support hand or fully automated application to insulating glass units. IGS3713 is supplied in a lightweight paste consistency that remains virtually unchanged to below zero and does not require heating or other special manipulation to easily dispense. Consult Momentive Performance Materials (MPM) regarding suggested pumping and application tools or equipment.



Storage Conditions

The shelf life of this product is 12 months from the date of manufacture. Product should be stored in the original unopened container at 80°F (27°C) or lower.

Availability

Information on ordering can be obtained by contacting your local distributor or account manager. The Customer Service telephone number is: +1 (877) 943-7325.

Applicable Standards

ASTM C1369 - Standard Specification for Secondary Edge Sealants for Structurally Insulating Glass Units.

ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

Technical Services

Additional technical information and literature may be available from MPM. Laboratory facilities and application engineering are available upon request from MPM. Any technical advice furnished by MPM or any representative of MPM concerning any use or application of any sealant is believed to be reliable but MPM makes no warranty, expressed or implied, of suitability for use in any application for which such advice is furnished.

Limitations

Customers must evaluate MPM products and make their own determination as to fitness of use in their particular applications.

IGS3713 insulating glass secondary sealant is not recommended:

- For use in single seal insulating glass units where a primary or moisture vapor seal is not present.
- In designs where the silicone is encapsulated and without access to atmospheric moisture (this material requires atmospheric moisture to cure from paste to rubber).
- For use underwater or in applications where the product will be in continuous contact with water.
- For use in food contact applications.

IGS3713 insulating glass secondary sealant should not be applied or used:

- As the structural adhesive for the installation of insulating glass units in sash, frame or between insulating glass units and curtainwall mullions in structural glazing applications.
- On wet, damp, frozen or contaminated surfaces.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Safety Data Sheets are available at siliconeforbuilding.com or, upon request, from any MPM representative. Use of other materials in conjunction with MPM sealants products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.



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