

EdgeSil™ IGS3723

Silicone Insulating Glass Sealant

Product Description

EdgeSil IGS3723 is a high-modulus neutral curing silicone for secondary sealing of both structural and nonstructural insulating glass units. EdgeSil IGS3723 is a two-component silicone that offers variable work life with fast deep section cure to accommodate scheduling and production needs.

Key Features and Typical Benefits

Performance

- **Silicone Durability** - Cured silicone rubber exhibits excellent long term resistance to natural weathering including: extreme temperatures, ultraviolet radiation, rain and snow, with negligible change in elasticity.
- **Fast Cure** - May allow for shipping of fabricated insulating glass units within hours of completion without silicone transfer or glass shifting.
- **Adhesion Performance** - Attains strong bonds to many conventional spacer materials without primer.
- **Successful History** - Component in numerous insulating glass units designs that meet the requirements of the ASTM E 2190 specification for IGU performance and evaluation.
- **Structural Capability** - May be utilized as the secondary sealant for insulating glass units fabricated for structural glazing applications.

Application

- **Low Pumping Viscosity** - Can allow for high unit throughput, low strain on production pumping equipment, and void free filling of the sealant cavity.
- **Low Sag or Slump** - Provides for ease of use on automated sealant lines.
- **Nonflammable** - Does not require special handling or storage associated with flammable materials.
- **Compatibility** - Compatible with our structural and weather sealing silicones as well as many commonly used accessories in the glass and glazing trade.

Aesthetics

- **Harmonized Color** - Grey catalyst is a close color match to commonly used polyisobutylenes that function as the primary seal.

Potential Applications

- EdgeSil IGS3723 is an excellent candidate to consider as a secondary seal in the fabrication of dual-sealed insulating glass units.

Packaging

EdgeSil IGS3723 is comprised of the following:

Base: IGS3723A base, white paste in 55-gallon drums filled to a weight of 585 pounds (265 kg) with a polyethylene liner.

Catalyst: There are two catalyst options:

- IGS3723B - black paste, mixes and cures to black silicone rubber. Available in 5 gallon pails filled to 40 pounds (18.2 kg) or 55 gallon drums filled to 430 pounds (195 kg).
- IGS3727B - grey paste mixes and cures to grey silicone rubber. Available in 5 gallon pails filled to 40 pounds (18.2 kg)
- All components are sold separately and kit matching is not required.

Colors

EdgeSil IGS3723 is available in black and grey.

Black: mix IGS3723A with IGS3723B

Grey: mix IGS3723A with IGS3727B



Black



Medium Grey

Typical Physical Properties

Typical property values of EdgeSil IGS3723 as supplied and cured are set forth in the tables below. Typical product data values should not be used as specifications.

Typical Properties

Uncured Properties	Base	IGS3723
Color	White	Thixotropic Paste
Specific Gravity	1.4	
Shelf Life	18 months ⁽¹⁾	
Uncured Properties	Catalyst	IGS3723B
Color	Black	Thixotropic Paste
Specific Gravity	1.0	
Shelf Life	12 months ⁽¹⁾	
Uncured Properties	Catalyst	IGS3727B
Color	Grey	Thixotropic Paste
Specific Gravity	1.0	
Shelf Life	12 months ⁽¹⁾	

Mixed Compound Properties

IGS2723A+IGS3723B or IGS3727B		
Color	Black or Grey	Thixotropic Paste
Specific Gravity Weight	1.36	Mixed at 12.5:1 by weight
Mix Ratio Range	8:1 to 11:1	By volume
Snap Time	20-75 minutes	Depends on ratio, temp. & RH
Tack Free Time	2X snap time	Depends on ratio, temp. & RH
Consistency/Sag	0.1" (2.5 mm)	Non-sagging

Cured Properties⁽²⁾

Full Cure at Standard Laboratory Conditions IGS3723A+IGS3723B or IGS3727B @ 12.5:1 mix ratio by weight		
Color	Black or Grey	IGS3723B or IGS3727B
Hardness Points (type A indenter)	43 ±3	ASTM D2240
Ult. Tensile Strength	304 psi (2.1 MPa)	ASTM D412
Ult. Elongation	200%	ASTM D412
Tear Strength	38.9 ppi (6.81 N/mm)	ASTM D624, die B
Shear Strength	130 psi (0.90 MPa)	ASTM C961
Accelerated Weathering, 5000 hours	Excellent, slight degradation	ASTM C1369
Heat Resistance	300°F (149°C)	

(1) When properly stored; see section on storage.

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

Installation

Mixing, Pumping and Dispensing

- EdgeSil IGS3723 should be mixed and dispensed using two-component mixing equipment. These mixing / pumping systems are specifically designed to meter precise proportions of A base and B catalyst, in a sealed environment, then mix and dispense material at proper pressures and volumes to ensure thoroughly mixed, air-free material.
- Consult equipment manufacturer or equipment manual for startup and shutdown procedures, operating pressures, mixing devices, and purging requirements.
- Hand mixing of A base + B catalyst is not recommended, except when performing pre-use quality testing.
- When exchanging B catalyst on equipment, care should be taken to minimize exposure to the environment in order to prevent premature curing of the catalyst.
- EdgeSil IGS3723 is a suitable candidate for both 'in-line' mixing systems and "purgeless" after-the-gun mixing equipment. Consult equipment manufacturer and/or Momentive Performance Materials (MPM) for information on mixing device options.
- When properly mixed, the material should be a solid, homogeneous color largely free of any swirling or marbling of colors. If incomplete mixing is noticed, cease operation until equipment adjustments can be performed to ensure that complete mixing is being attained.

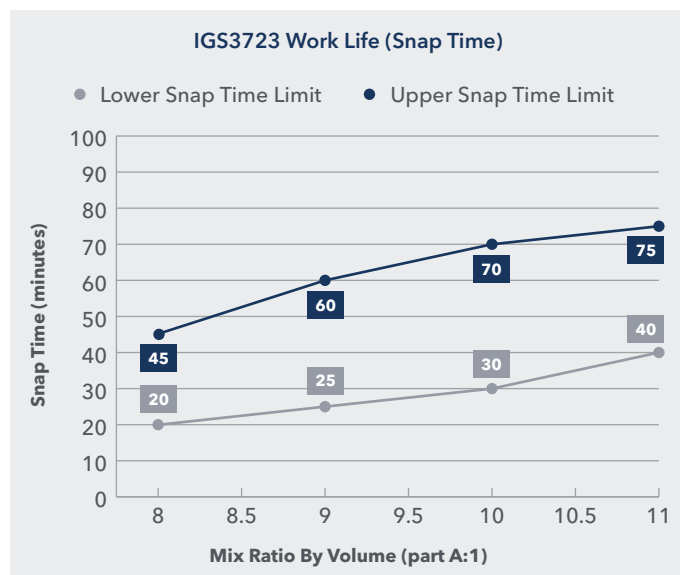
Quality Control Recommendations

- Upon receipt and prior to production, a sample of base (part A) and catalyst (part B) can be taken from each lot of material to be used, weighed to the desired A/B ratio, mixed and checked for proper curing before placing material into production. This procedure validates material performance separately from production equipment.
- A Quality Control program is highly recommended to aide in the assessment of proper and consistent mixing during operations. Daily snap time and butterfly testing should be performed at line start up and after material changes on equipment. Contact an MPM Technical Services representative for information on suggested Quality Control checks.
- Adhesion testing to production substrates should be included within the quality control program.

Technical Services

Additional technical information, literature, laboratory testing and application engineering may be available upon request from MPM. Any technical advice furnished by MPM or any representative of MPM concerning any use or application of any MPM product 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.

IGS3723 Weight to Volume Ratio Correlation - Mix Ratio	
10.88:1 by weight	8:1 by volume
12.25:1 by weight	9:1 by volume
13.60:1 by weight	10:1 by volume
14.96:1 by weight	11:1 by volume



Relevant Standards

EdgeSil IGS3723 Insulating Glass Silicone meets or exceeds the requirements of the following standards and specifications:

- American Society for Testing and Materials
 - C1369 Standard Specification for Secondary Edge Sealant for Structurally Glazed Insulating Glass Units
 - E2190 Standard Specification for Insulating Glass Unit Performance and Evaluation
- European Organization for Technical Approvals
 - European Assessment Document ETAG002

- European Committee for Standardization
 - EN1279 Glass in Buildings - Insulating Glass Units
 - Part 2: Long term test method and requirements for moisture penetration
 - Part 3: Long term test method and requirements for gas leakage rate and for gas concentration tolerances
 - Part 4: Methods of test for the physical attributes of edge seals
- Standardization Administration of China
 - GB24266 Secondary edge silicone sealant for structurally glazed insulating glass units

Limitations

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

- EdgeSil IGS3723 should only be used in the fabrication of insulating glass where the dual seal method of fabrication is used. The moisture vapor transmission rate of silicone sealants is sufficiently high as to preclude their use in the fabrication of single seal insulating glass units.
- Avoid using building materials intended for direct contact with EdgeSil IGS3723 that will migrate fluids that can discolor the secondary seal or degrade the PIB physical properties through solvating or softening. Contact MPM technical services for additional information.
- Avoid the use of sealants that evolve acetic acid when the cure byproduct of such sealants may be exposed to the secondary seal.
- Not recommended for water immersion applications.

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 SDS and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. SDS are available at www.siliconesforbuilding.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.

Customer Service Centers

Americas	+1 800 295 2392 Toll free Email: commercial.services@momentive.com
Latin Americas	Brazil +55 11 4534 9650 Direct Number Email: contato@momentive.com Mexico +52 55 2169 7670 Direct Number Email: commercial.services@momentive.com
EMEIA - Europe, Middle East, Africa, and India	Europe +39 05 1092 4300 Direct Number Middle East, Africa and India + 91 44 7121 2207 Direct Number* *All Middle Eastern countries, Africa, India, Pakistan, Bangladesh, Sri Lanka Email: 4information.eu@momentive.com
APAC - Asia Pacific	China 800 820 0202 Toll free +86 21 3860 4892 Direct Number Japan Sales: JP.Silicones@momentive.com Korea +82 2 6201 4600 Direct Number South East Asia, Australia & New Zealand +60 3 9206 1543 Direct Number* *South East Asia countries (Malaysia, Singapore, Thailand, Indonesia, Vietnam, Philippines, Cambodia, Myanmar / other countries located in Pacific region).
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