



IGS3723

Two-Component Insulating Glass Silicone

Product Description

IGS3723 is a high-modulus neutral curing silicone for secondary sealing of both structural and nonstructural insulating glass units. 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 joint.
- **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 GE 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

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

Packaging

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 (18.16kg) 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 (18.16kg)
- All components are sold separately and kit matching is not required.

Colors

IGS3723 is available in black and grey.

Black: mix IGS3723A with IGS3723B

Grey: mix IGS3723A with IGS3727B

Note: color is grey is called 'Medium Grey' and is color-matched to SSG4607 Medium Grey 2-part structural sealant and to SCS2007 Medium Grey weathersealant. Color will show minor variation with change in mix ratio.

Typical Physical Properties

Typical property values of 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	1.40	-
Shelf Life	18 months ⁽¹⁾	-
Uncured Properties	Catalyst	IGS3723B
Color	Black	Thixotropic Paste
Specific Gravity	1.00	-
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
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		
Color	Black or Grey	IGS3723B or IGS3727B
Hardness Points (type A indenter)	43	ASTM D2240
Ult. Tensile Strength	304 psi (2.1 MPa)	ASTM D412
Ult. Elongation	200%	
Tear Strength	38.9 ppi (6.81 N/mm)	ASTM D624, die B
Shear Strength	130.53 psi (0.90 MPa)	ASTM C961
Accelerated Weathering, 5000 hours	Excellent, no 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

- 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.
- IGS3723 is a suitable candidate for both 'in-line' mixing systems and "purgeless" after-the-gun mixing equipment. Consult equipment manufacturer and/or MPM for information on mixing device options.
- When properly mixed, the material should be a solid, homogeneous color 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) should 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

Limitations

Customers must evaluate Momentive Performance Materials (MPM) products and make their own determination as to fitness of use in their particular applications.

- 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 IGS3723 that will migrate fluids that can discolor the secondary seal or degrade the PIB physical properties through solvating or softening. Contact Momentive Performance Materials (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 Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.ge.com/silicones 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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