

RapidStrength* RGS7700 Residential two-component silicone, *fast curing window bedding sealant*

Product Description

RapidStrength RGS7700 window bedding sealant is a new two-component, 100% silicone neutral cure sealant that rapidly builds adhesive and elastomeric strength for bedding of glass in residential and light commercial window sash. Typically, within 8 to 15 minutes of mixing and applying, RapidStrength RGS7700 window bedding sealant develops sufficient elastomeric and adhesive strength to permit movement and handling of sash subassemblies without glass slippage. The material is supplied as a two-component system and is typically used with continuous proportioning equipment configured with disposable static mixers. RapidStrength RGS7700 window bedding sealant is typically used at base to curing agent volume mix ratios from 8/1 to 12/1. Lower mix ratios provide fastest strength build times.

Typical Performance Properties

RapidStrength RGS7700 window bedding sealant is a 100% silicone composition with traditional elastomeric properties. Typical properties include:

- Primerless adhesion to most vinyl, wood, anodized aluminum and fluoropolymer and polyester paints
- Consistent physical properties over a broad temperature range: -20°F (-29°C) to 140°F (60°C)
- Capable of absorbing movement between glass and sash materials and minimizing stress cracking glass failures
- Fast, deep section cure for productivity improvement
- Proven performance in hurricane code window designs
- Open time of 4-8 minutes and ability to reposition glass
- Adjustable open times, cure speed and strength development speed through volume mix ratio adjustment within range of 8/1 to 12/1
- Ease of deglazing expected from silicone bedding
- Ease of processing using two-component mixing/dispensing equipment with low cost, disposable, static mixers
- Easily dispensed with either a hand-assist or automatic X-Y table

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We are helping customers solve product, process, and performance problems; our silanes, fluids, elastomers, sealants, resins, adhesives, urethane additives, and other specialty products are delivering innovation in everything from car engines to biomedical

devices. From helping to develop safer tires and keeping electronics cooler, to improving the feel of lipstick and ensuring the reliability of adhesives, our technologies and enabling solutions are at the frontline of innovation.



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RapidStrength* RGS7700 two-component silicone, fast curing window bedding sealant

Basic Uses

RapidStrength RGS7700 window bedding sealant may be suitable for use in bedding monolithic and laminated glass and insulating glass units into residential and light commercial window sash. The fast green strength development typically provides sufficient elastomeric structural strength to restrict movement within 8-12 minutes of setting glass.

The physical properties of RapidStrength RGS7700 window bedding sealant are similar to those of cured one-component silicones. RapidStrength RGS7700 window bedding sealant may be substituted for one component silicone bedding sealants in many existing designs while potentially achieving benefits which derive from its fast strength development.

Figure 1: RapidStrength RGS7700 Window Bedding Sealant Strength Build Rate @ 10 to 1 Volume Mix Ratio

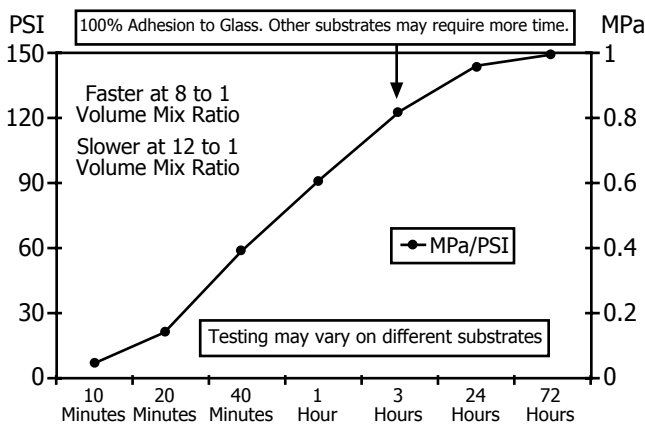
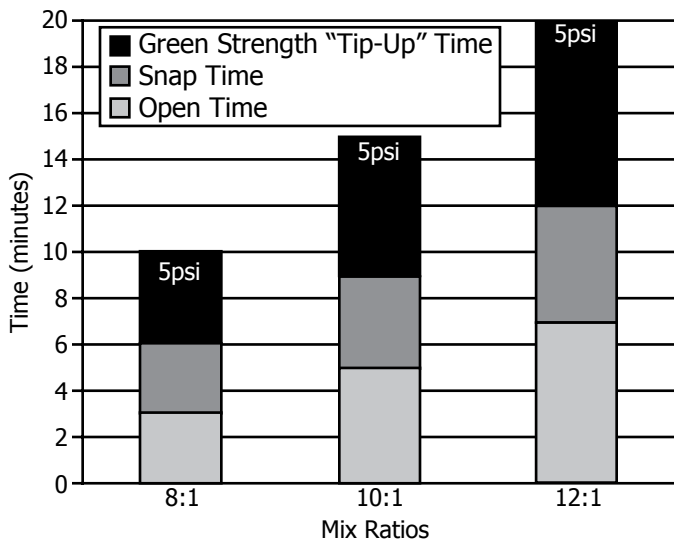


Figure 2: Curing Times / psi



Packaging

RapidStrength RGS7700 window bedding sealant is available as a two-component system. The base component, RapidStrength RGS7700A base is available in 55 gallon fiber or steel, open top drums containing 44.4 gallons (166.5 L). The curing agent, RapidStrength RGS7700B/RGS7703B catalyst is available in plastic 5 gallon pails containing 4.6 gallons (17.3 L) or 55 gallon steel open top drums containing 46.1 gallons (172.9 L). For ease of use and waste reduction, RapidStrength RGS7700A base and RapidStrength RGS7700B catalyst are not kit matched. Therefore, any batch or container of base may be used with any batch or container of curing agent. Small amounts of clear liquid may be visible on the surface of the catalyst. This should not impact product performance.

Colors

RapidStrength RGS7700 is currently available in Gray and Black:

- Base Part A RGS7700A, Off White
- Curing Agent Part B RGS7700B, Black (Yields Gray when mixed with RGS7700A)
- Curing Agent Part B RGS7703B, Black (Yields Black when mixed with RGS7700A)

When mixed at volume ratios from 8/1 to 12/1 RapidStrength RGS7700A base and RapidStrength RGS7700B catalyst produce a medium gray finished product.

For custom color availability, contact your Momentive Performance Materials¹ sales representative.

Volume Ratio vs. Weight Ratio for RapidStrength RGS7700A Base with RapidStrength RGS7700B/RGS7703B Catalyst

Volume Ratio/1	Weight Ratio/1
8	10.4
9	11.7
10	13.0
11	14.3
12	15.6

Limitations

Although RapidStrength RGS7700 window bedding sealant is not directly dependent on exposure to atmospheric moisture to cure, it requires ventilation to complete its cure and adhesion development by releasing its cure byproduct. RapidStrength RGS7700 window bedding sealant should not be used in a completely sealed environment. It is not designed for continuous water immersion. RapidStrength RGS7700 window bedding sealant provides primerless adhesion to a wide range of substrates, but variability in substrate composition and/or cleanliness can interfere with adhesion. The user is responsible for ensuring that the adhesion characteristics of RapidStrength RGS7700 window bedding sealant to the user's substrates will meet his expectations.

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Technical Services

Complete GE branded sealants technical information and literature are available from Momentive Performance Materials.¹ Laboratory facilities and application engineering are available upon request from Momentive Performance Materials.¹ Any technical advice furnished by Momentive Performance Materials¹ or any representative of Momentive Performance Materials¹ concerning any use or application of any sealant is believed to be reliable but Momentive Performance Materials¹ makes no warranty, express or implied, of suitability for use in any application for which such advice is furnished.

Applicable Standards

RapidStrength RGS7700 window bedding sealant meets or exceeds the requirements of the following specifications for two-part sealants. Meets AAMA 802.3-92, Type II, 805.2-95, Group C.

ASTM Specifications
 • C1184

Joint Designs and Dimensions

The window professional has final responsibility for the determination of structural sealant joint dimensions based on factors such as design wind loads, glass sizes and anticipated thermal movement.

Typical Physical Properties

As Supplied	Property	Value	Method
RapidStrength RGS7700A Base			
	Color	Off White	Visual
	Application Rate (Viscosity)	750 gr./minute	ASTM C-1183
	Specific Gravity	1.35	WPSTM P-15
RapidStrength RGS7700B/RGS7703B Catalyst			
	Color	Black	Visual
	Specific Gravity	1.04	WPSTM P-15
VOC Data	RGS7700A RGS7700B RGS7700A with RGS7700B @ 13:1 wt. ratio RGS7703B RGS7700A with RGS7703B @ 13:1 wt. ratio	4 145 17 122 25	expressed as g/l (excluding water & exempts)

As Cured

RapidStrength RGS7700A Base with RapidStrength RGS7700B/RGS7703B Catalyst mixed @ 10/1 volume mix ratio			
	Color	Gray	Visual
	Open Time, for laying glass	6 minutes	
	Cure Time, to stable properties	Up to 7 days	
Cure time 24 hrs. @ 72°F, 50% RH except where noted otherwise			
	Tensile Strength	230 psi	ASTM D 412
	Elongation	280%	ASTM D 412
	Modulus @ 50% Elongation	50 psi	ASTM D 412
	Modulus @ 100% Elongation	110 psi	ASTM D 412
	Peel Strength to Float Glass	50 ppi	ASTM C 794
	Peel Strength to PVC	40 ppi	ASTM C 794
	Peel Strength to Mill Finish Aluminum	49 ppi	ASTM C 794
	Peel Strength to Kynar Coated Aluminum	43 ppi	ASTM C 794
	Green Strength @ 15 minutes Cure Time	15 psi	ASTM C 1135
	Green Strength @ 60 minutes Cure Time	100 psi	ASTM C 1135
	Hardness	Shore A: 28	ASTM D 2240
	Movement Capability	Plus, minus 50%	

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Technical Data

RapidStrength RGS7700 window bedding sealant exhibits excellent resistance to ultraviolet radiation, ozone, high and low temperatures, water vapor and natural weathering. It is compatible with many types of coated glass, metal finishes, glazing gaskets, setting blocks and spacers. Momentive Performance Materials¹ can provide upon request compatibility and adhesion testing between RapidStrength RGS7700 window bedding sealant and substrates and components used in window sash glazing assemblies.

Installation

Surface Preparation

RapidStrength RGS7700 window bedding sealant has been formulated to develop adhesion to most materials commonly used in manufacturing windows and doors including: glass, vinyl extrusions, fluoropolymer, acrylic, and polyester paints, various woods, and anodized aluminum.

Sealants may not adhere to these substrates or less than maximum adhesion may result if the surface is contaminated. Foreign materials such as but not limited to dirt, dust, oils and water and other contaminants particular to certain substrates including sawdust, machine oils, water, water repellants, biocides, vinyl plasticizers and lubricants, waxes on painted surfaces, salt deposition on anodized surfaces can and may interfere with development of adhesion.

Momentive Performance Materials¹ can provide at the customer's request laboratory testing services to evaluate the adhesion and compatibility of its sealants to submitted customer substrates. This testing can provide data on what adhesion levels are to individual substrates and provide direction to the user on how adhesion may be improved through modification of the substrate surface properties in design or manufacture or special cleaning and/or priming procedures. Momentive Performance Materials¹ can also provide upon request technical services including specific cleaning procedures and priming recommendations for the customer to evaluate.

The user of RapidStrength RGS7700 window bedding sealant is strongly advised to conduct his own testing to determine if the adhesion to the desired substrate is satisfactory for his needs. It is also recommended that the user conduct periodic quality control testing on their substrates and sealant during the course of using them in manufacturing operations to maintain a continued assurance that substrate, sealant or other conditions that could affect adhesion have not changed and that adhesion requirements are being met.

RGS7700B/RGS7703B curing agents are moisture sensitive and should not be exposed to atmospheric moisture for extended periods.

Sealant Application

- The sealant should be mixed and applied using suitable continuous mixing equipment. Two-component equipment employing air operated pumps or servo driven gear pumps with adjustable mix ratio control perform satisfactorily.
- Because of the fast speed designed into RapidStrength RGS7700, disposable static mixers with 24-30 mixing elements that mount directly on the outlet of the dispensing gun have provided best results.

Mixing, Pumping and Dispensing

Consult Momentive Performance Materials¹ regarding suggested pumping equipment and pumping procedures for mixing and dispensing RapidStrength RGS7700 window bedding sealant.

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Patent Status

RapidStrength SilGlaze RGS7700 window bedding sealant is the subject of one or more pending US patent applications.

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.momentive.com or, upon request, from any Momentive Performance Materials¹ representative. Use of other materials in conjunction with Momentive Performance Materials¹ products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Emergency Service

Momentive Performance Materials¹ maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC), Transport Canada (CANUTEC), and the Chemical Emergency Agency Service also maintain an around-the-clock emergency service for all chemical products:

Location	GE Branded Products	All Chemical Products
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	CANUTEC: 613.996.6666 (collect) or CHEMTREC: 800.424.9300
Europe, Middle East, Africa	+32.(0)14.58.45.45 (Belgium)	CHEMTREC: +1-703.527.3887 (collect)
Latin America, Asia/Pacific, all other locations worldwide	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials ¹ at 518.233.2500	CHEMTREC: 800.424.9300

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

CUSTOMER SERVICE CENTERS

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• RTV's and Elastomers	T +1.800.332.3390	F +1.304.746.1623
• Consumer Sealants & Construction Sealants and Adhesives	T +1.877.943.7325	F +1.304.746.1654

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