

SnapSil* RTV230A/B Adhesive

Product Description

SnapSil* RTV230A/B adhesive is a two-component, room temperature cure silicone adhesive that features a fast tack free time, primerless adhesion to many substrates and greater flexibility in usage and storage.

This condensation cure silicone adhesive is an excellent candidate for industrial assembly applications where a faster cure speed is desired, where heat to cure an adhesive can damage components, or where greater productivity is needed.

Key Features and Typical Benefits

- Fast cure time at room temperature; no heat required to cure
- Fast green strength build
- Excellent primerless adhesion to many substrates
- UL94 recognition pending
- Designed to offer high levels of productivity
- Easy to dispense; convenient 10:1 mix ratio
- Extended room temperature storage prior to mixing
- No cure inhibition concerns

Momentive Performance Materials provides versatile materials as the starting point for our creative approach to ideas that help enable new developments across hundreds of industrial and consumer applications. 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.



SnapSil* RTV230A/B Adhesive

Typical Product Data

UNCURED PROPERTIES

Cure Chemistry	Alkoxy
Mix Ratio (base to curing agent by volume)	10:1
Color (Final Product)	White
Viscosity (cps)	RTV230A: 700,000 RTV230B: 95,000
Application Rate @ 45 psi, g/min	RTV230A: 250 RTV230B: 80

CURED PROPERTIES

Specific Gravity (23°C), Cured	1.39
Hardness, Shore A Durometer	36
Tensile Strength, psi	250
Elongation, %	280
Green Strength @ 15 minutes, psi ⁽¹⁾	20
Green Strength @ 30 minutes, psi ⁽¹⁾	40

Processing:

Work (Pot) Life	5 to 10 minutes
Cure Through Time @ 25°C (77°F) ⁽²⁾	30 minutes
Useful Operating Temperature Range, continuous	-50°C to 205°C (-58°F to 400°F)

ELECTRICAL PROPERTIES

Dielectric Strength (75 mils), V/mil	410
Dielectric Constant @ 60 Hz	3.75
Dissipation Factor @ 60 Hz	0.13
Volume Resistivity, μ -cm	9.3×10^{13}

(1) Substrates used were glass and Alclad 2024-T3 aluminum; specimen dimensions $\frac{1}{2} \times 1 \times \frac{1}{8}$ (L x W x T)

(2) Full property development can take up to 24 hours

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Adhesion Performance

SnapSil RTV230A/B adhesive provides primerless adhesion to a wide variety of substrates. Lap shear testing with the following substrates reveals 100% cohesive failure.

- Glass
- Fiberglass
- Formica
- Cold Rolled Steel
- Stainless Steel
- Galvanized Steel
- Carbon Steel
- Aluminum
 - 2024-T3 Anodized and Alclad
 - 2024-T4 Alclad
 - Mill Finish 3003
 - 3003-H14 Bare
- PVC
- Cycloy MC8100
- Lexan 141
- Lexan EXL9330
- Noryl HNA055
- Ultem 1000
- Valox 325
- Xenoy 5220U
- Xylex X8300HP

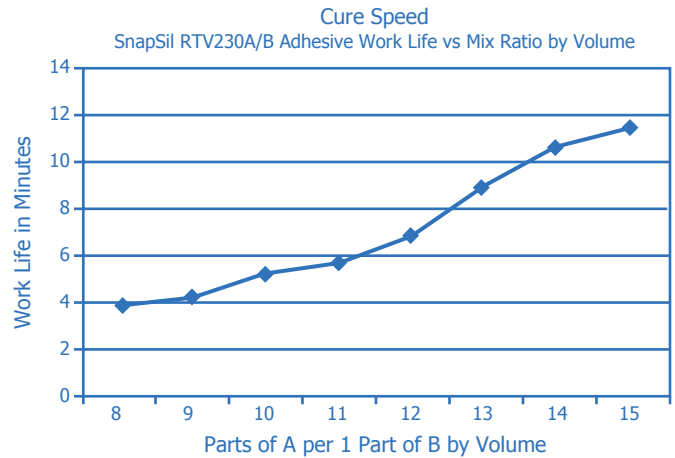
Lexan, Noryl, Ultem, Valox, Xenoy and Xylex are trademarks of General Electric Company.

Additional Adhesion Testing is in progress on other various substrates. Please contact your local Momentive Performance Materials representative for more information.

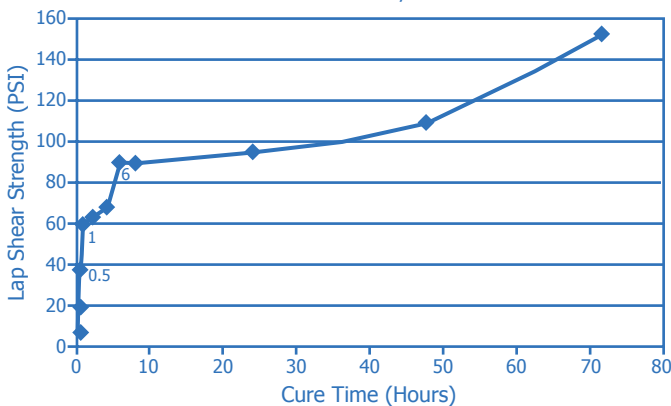
The following chart shows the property build profile of SnapSil RTV230A/B adhesive over time. The adhesion testing was conducted at a 10:1 mix ratio by volume (base to curing agent). The substrates used were glass and Alclad 2024-T3 aluminum. Cure times are typical values, which may be affected by many variables including but not limited to bead size, temperature, relative humidity, specific application and the equipment used.

Cure Profile

The following chart shows the effect of mix ratio by volume (base to curing agent) on work life for SnapSil RTV230A/B adhesive. Cure times are typical values, which may be affected by many variables including but not limited to bead size, temperature, relative humidity, specific application and the equipment used.



SnapSil RTV230A/B Adhesive Lap Shear Strength vs Cure Time
Mix Ratio 10:1 By Volume



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Instructions for Use

Mixing

SnapSil RTV230A/B adhesive offers a fast work time and automated meter-mix-dispense equipment is recommended to gain optimum productivity. SnapSil RTV230A/B adhesive is thixotropic and as such it is important to avoid the introduction of air during mixing. Suggested techniques to minimize the introduction of air are as follows: if mixing by hand, utilize a centrifugal mixer or if dispensing from a cartridge, utilize a static mixer.

The minimum recommended mix ratio for hand mixing is 10:1 by volume. When hand mixing, select a mixing container 4-5 times larger than the volume of RTV silicone rubber compound to be used. Weigh out the RTV silicone rubber base compound and add the appropriate amount of curing agent. With clean tools, thoroughly mix the RTV base compound and the curing agent, scraping the sides and bottom of the container carefully to produce a homogenous mixture. When using power mixers, avoid excessive speeds, which could entrap large amounts of air or cause overheating of the mixture, resulting in shorter pot life.

De-Aeration

Air entrapped during mixing should be removed to eliminate voids in the cured product. Expose the mixed material to a vacuum of about 29 inches (25 mm) of mercury. The material will expand, crest, and recede to about the original level as the bubbles break. Degassing is usually complete about two minutes after frothing ceases.

Equipment

Pumping and meter-mixing systems for two part silicones are available from a number of manufacturers, most of who will provide a complete integrated system. Contact Momentive Performance Materials for further information.

Curing

SnapSil RTV230A/B adhesive is designed to cure through in 30 minutes with full property development within 24 hours at room temperature (77°F/25°C) and 50% relative humidity. This system is sensitive to changes in heat and humidity and therefore variations in cure speed may be seen if one or both variables are changed.

Compatibility

SnapSil RTV230A/B adhesive will cure in contact with most clean and dry surfaces. Compatibility tests should be performed on all materials in contact with the uncured silicone, including painted surfaces.

Surface Preparation

The adhesive performance of any polymer system is highly dependent upon proper surface preparation. In order to maximize the adhesion of the SnapSil RTV230A/B adhesive, all parts should be as clean and dry as possible prior to the application of the silicone.

Bonding

SnapSil RTV230A/B adhesive offers excellent adhesion characteristics to a wide variety of substrates without the need of a primer. For difficult-to-bond-to substrates, or where more aggressive chemical adhesion is desired, the use of a Momentive Performance Materials primer can be used. For more details on priming and adhesion, please refer to the Momentive Performance Materials product data sheet on silicone primers.

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Patent Status

US and foreign patent applications pending.

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 Materials representative. Use of other materials in conjunction with Momentive Performance Materials products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

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

Emergency Service

Momentive Performance Materials 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	Momentive Performance Materials 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 at 518.233.2500 or CHEMTREC at 800.424.9300.	

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



MOMENTIVE

performance materials

Principal Locations

Regional Information	Phone	Fax
North America World Headquarters 187 Danbury Road Wilton, CT 06897, USA	800.295.2392	607.754.7517
Latin America Rodovia Eng. Constâncio Cintra, Km 78,5 Itatiba, SP – 13255-700 Brazil	+55.11.4534.9650	+55.11.4534.9660
Europe, Middle East, Africa and India Leverkusen Germany	00.800.4321.1000 +31.164.293.276	+31.164.241750
Pacific Akasaka Park Building 5-2-20 Akasaka Minato-ku, Tokyo 107-6112 Japan	+81.3.5544.3100	+81.3.5544.3101
Customer Service Centers		
North America Charleston, WV 25314, USA E-mail: cs-na.silicones@momentive.com	Specialty Fluids 800.523.5862	304.746.1654
	UA, Silanes, Resins, and Specialties 800.334.4674	304.746.1623
	RTV Products-Elastomers 800.332.3390	304.746.1623
	Sealants and Adhesives and Construction 877.943.7325	304.746.1654
Latin America Argentina and Chile Brazil Mexico and Central America Venezuela, Ecuador, Peru, Colombia, and Caribbean E-mail: cs-la.silicones@momentive.com	+54.11.4862.9544 +55.11.4534.9650 +52.55.5899.5135 +58.212.285.2149	+54.11.4862.9544 +55.11.4534.9660 +52.55.5899.5138 +58.212.285.2149
Europe, Middle East, Africa and India E-mail: cs-eur.silicones@momentive.com	00.800.4321.1000 +31.164.293.276	+31.164.241750
Pacific E-mail: cs-ap.silicones@momentive.com Japan E-mail: cs-jp.silicones@momentive.com China Korea Singapore	+81.276.20.6182 +86.21.5050.4666 (ext. 1523) +82.2.6201.4600 +65.6220.7022	
Worldwide Hotline	800.295.2392	+607.786.8131
Worldwide Web		www.momentive.com

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