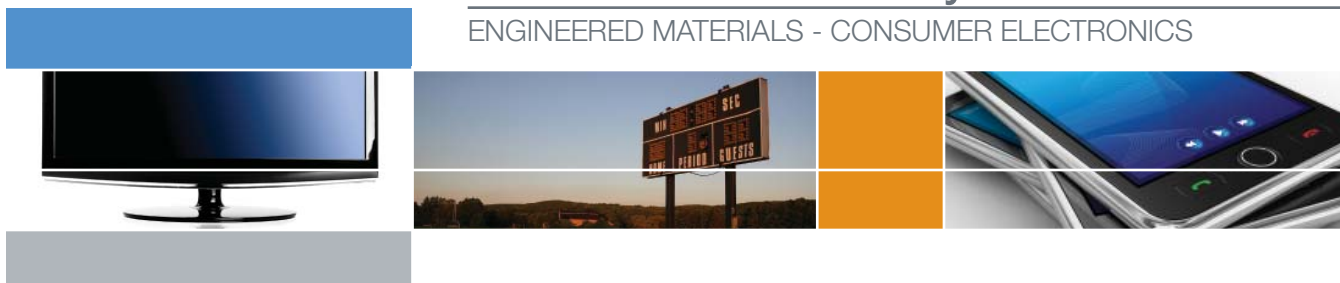


RTV210 A/B silicone adhesive system

ENGINEERED MATERIALS - CONSUMER ELECTRONICS



RTV210 A/B is a two-component, thixotropic pasty silicone adhesive system that offers very fast cure. The paste typically cures quickly to a durable and resilient silicone rubber at room temperature with primerless adhesion to many substrates.

The thixotropic paste consistency of RTV210 A/B allows it to be considered for application to vertical and overhead surfaces. This consistency can also facilitate the fixture of small parts, in place, while the adhesive cures.

Key Features and Typical Benefits

- very fast room temperature cure
- two-component for controlled cure rate
- primerless adhesion to many substrates
- low odor
- non-corrosive to most metals, compatible with many plastics
- low temperature flexibility
- excellent weatherability, ozone and chemical resistance
- excellent electrical insulation properties
- UV Stability

RTV210 A/B may be considered for applications requiring very fast cure, or a more controlled cure speed, typically with primerless adhesion and at room temperature.

Representative potential applications include the adhesion of dissimilar materials in the assembly of solar panels, such as in rail attach/bonding applications and CPV assemblies.

RTV210 A/B may be considered for use in electronic and electrical applications where a non-corrosive adhesive is required.

Typical Physical Properties			
Uncured Properties		RTV210A	RTV210B
Consistency		Thixotropic paste	Thixotropic paste
Color		White	Black
Specific Gravity	g/cm ³	1.37	1.03

Mixed Properties		RTV210 A/B
Mix Ratio RTV210A to RTV210B in Parts by Weight		100:8
Specific Gravity	g/cm ³	1.35
Tack-free Time	minutes	7-8
Color		Black

Cured Properties ⁽¹⁾		
Hardness	Shore A	36
Tensile Strength	MPa	1.8
Elongation	%	250
Shear Strength ⁽²⁾	MPa	0.85

(1) 24 hrs. cure at 25°C / 50% RH

(2) glass/glass 25 x 25 mm overlap, 2.5 mm bond line thickness, 72 hrs. cure at 25°C / 50% RH

Typical property data values should not be used as specifications.

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General Instructions for Use

Surface Preparation

Before applying RTV210 A/B, all surfaces should be cleaned with a cleaner appropriate for the substrate to obtain optimal bond between RTV210 A/B and the substrate.

Packaging and Dispensing

Mixing

Changes in the ratio will have an impact on catalyzed work life, fixture time and cure time. Typically, increasing the ratio from the standard 100:10 will speed the reaction, while decreasing the ratio will slow the reaction.

RTV210A - RTV224B can be mixed either by using a manual two-component system with static mixer or with automated meter/mixing dispensing equipment. These automatic systems can precisely meter appropriate ratios of each component and deliver either a continuous flow or a measured shot size of thoroughly mixed material. This type of equipment may be particularly beneficial in high volume continuous production environments.

RTV224B is sensitive to prolonged exposure to atmospheric moisture and should therefore be kept in a closed container whenever possible to maximize the useful life.

Curing

When mixed at the standard by-weight-ratio given for both catalysts, RTV210 will have a typical tack-free time of about 6 minutes at ambient conditions of 25°C / 50% RH. Under these conditions, the fixture time will be approximately 10 - 20 minutes, depending on the application. Complete cure will usually be seen within 24 hours. Maximum properties will normally be achieved within 3 days. RTV210A - RTV224B, as a two-component product, can be used for cross sections greater than 6 mm. As the adhesive cures, alcohol vapors are released from the product. This by-product of the curing reaction has a slight non-objectionable odor, which should diminish as the cure progresses. This cure by-product should be allowed to dissipate completely (approximately 24 hours for 6 mm thickness) prior to totally enclosing the material. Mild heat (*i.e.* below 50°C) will typically shorten the work-life and fixture time of the product, but will not significantly reduce the time required for a complete cure.

Adhesion

Development of maximum bond strength will depend on joint configuration, degree of confinement, adhesive thickness and substrate preparation. Normally, sufficient bond strength will develop within 10 - 20 minutes to permit handling of the parts. Minimum stress should be applied to the adhesive bond for 24 hours. RTV210 - RTV224B typically adheres without primer or pre-treatment to most glass, metal and plastic surfaces. In exceptional cases of difficult-to-bond substrates, use of a primer such as SS4004P, SS4179, or surface treatment such as plasma can be used to obtain adhesion with RTV210A - RTV224B.

Examples of substrates where primerless adhesion is typically obtained are:

- *Metals:* anodized aluminum, bare aluminum, stainless steel, galvanized steel
- *Plastics:* ABS, polycarbonate (coated and uncoated grades), PA6.6 GF30
- *Rubbers:* post cured peroxide cured silicone HCR and 2 part addition cure RTV

For each specific application, the user should test whether proper adhesion is obtained with RTV210A - RTV224B, either without or with use of a primer or surface treatment.

Clean Up and Removal

For uncatalyzed or uncured mixed material, solvent systems such as naphtha or methyl ethyl ketone (MEK) are more effective for cleanup. When solvents are used, proper precautions must be observed.

After cure, selected chemical strippers, which will remove the silicone rubber, are available from other manufacturers. Specific information may be obtained on request.

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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 should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at www.momentive.com or, upon request, from any Momentive Performance Materials (MPM) representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

The shelf life from both components will be indicated by the “use before date” on the associated documents with a minimum of 6 months from date of manufacture when stored in the original unopened containers. RTV210A should be stored at or below 27°C. RTV224B should be stored at or below 18°C.

The RTV224B can also be stored at or below 27°C for 4 months with typically no adverse effect upon product cure speed or cured physical properties.

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.

<u>Location</u>	<u>Emergency Service Provider</u>	<u>Emergency Contact Number</u>
Mainland U.S., Puerto Rico	CHEMTREC	1-800-424-9300
Alaska, Hawaii	CHEMTREC	1-800-424-9300
Canada	CHEMTREC	1-800-424-9300
Europe, Israel	NCEC	+44 (0) 1235239670
Middle East	NCEC	+44 (0) 1235239671
Asia Pacific (except China)	NCEC	+44 (0) 1235239670
China	NCEC	+86-10-5100-3039
Latin America (except Brazil)	NCEC	+44 (0) 1235239670
Brazil	SOS Cotec	08000111767 or 08007071767
All other locations world wide	NCEC	+44 (0) 1235239670
At sea	Radio U.S. Coast Guard in U.S. waters NCEC in International waters	+44 (0) 1235239670

For Health related calls, contact Momentive Performance Materials at +1-518-233-2500 (English only).

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

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