

## RTV566

### Description

RTV566 silicone rubber compound is a two-part product processed and tested for applications where low outgassing is required. RTV566A base compound is supplied ready to use with RTV566B curing agent.

### Key Features and Benefits

- Provides low outgassing characteristics in a high vacuum environment
- Room temperature cure
- Excellent release properties
- Excellent adhesion capability with primer
- Retains elastomeric properties from -115°C (-175°F) up to 260°C (500°F) continuously and up to 316°C (600°F) for short periods of time

### Typical Physical Properties

#### TYPICAL UNCURED PROPERTIES

	RTV566A	RTV566B
Color	Red	Yellow Brown
Viscosity, cps	42,700	N/A
Specific Gravity	1.49	1.15

#### TYPICAL CATALYZED PROPERTIES

**(Mixture by weight of 100 parts RTV566A and 0.1 part RTV566B)**

	RTV566
Application Rate, gm/min (45 minutes after mixing) (0.125 in. orifice @ 90 psi)	180
Work Life, Hrs.	1.5
Tack Free Time, Hrs.	2.2

**TYPICAL CURED PROPERTIES**  
**(Cured 7 days @ 25°C (77°F) and 50% R.H.)**

	RTV566
Hardness, Shore A Durometer	61
Tensile Strength, kg/cm <sup>2</sup> (psi)	56 (800)
Elongation, %	120
Lap Shear Strength, kg/cm <sup>2</sup> (psi) (on primed Al)	33 (465)
Volatile Condensable Material %*	0.02
Total Weight Loss %*	0.14

\* ASTM E595 Standard Test Method.

**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 Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any 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.

## **Processing Recommendations**

### **Mixing**

Select a mixing container 4 to 5 times larger than the volume of RTV silicone rubber compound to be used. Weigh out the RTV566A base compound and add the appropriate amount of RTV566B curing agent. The most commonly used amount of curing agent is 0.1% by weight (0.087 ml curing agent per 100 gm base compound). When measuring and dispensing small amounts of curing agent, the use of a microsyringe is recommended for accuracy.

Using clean tools, thoroughly mix the RTV base compound and the curing agent, scraping the sides and bottom of the container carefully to produce a homogeneous 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.

### **Deaeration**

Air entrapped during mixing should be removed to eliminate voids in the cured product. Expose the mixed material to a vacuum of 25 mm (29 inches) of mercury minimum. 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. When using RTV566 for potting, deaeration may be necessary after pouring to avoid capturing air in complex assemblies.

### **Curing**

RTV566 silicone rubber compound, when properly mixed, will cure sufficiently in 24 hours at 25°C (77°F) and 50% relative humidity to allow gentle handling. For best results, especially with regard to outgassing and adhesion, cure for seven days at 25°C (77°F) and 50% relative humidity.

If this RTV silicone rubber compound is to be used at temperatures over 150°C

(302°F), the cured product should be properly conditioned prior to service. Following full room temperature cure, a typical conditioning program would be eight hours at 100°C (212°F) and an additional eight hours at each 28°C (80°F) interval to the desired service temperature. Longer times at each temperature will be required for larger parts or very deep sections.

## Bonding

If adhesion is an important application requirement, RTV566 silicone rubber compound requires a primer to bond to non-silicone surfaces. Thoroughly clean the substrate with a non-oily solvent such as naphtha or methyl ethyl ketone (MEK) and let dry. Then apply a uniform thin film of Momentive Performance Materials SS4155 silicone primer and allow the primer to air dry for one hour or more (a uniform chalky white haze should be visible). Finally, apply freshly catalyzed RTV silicone rubber to the primed surface and cure as recommended above. For more details on priming and adhesion, refer to Momentive Performance Materials datasheet on RTV primers.

## Limitations

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

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