

RTV566

**Silicone Rubber Compound  
for Low Outgassing Applications**

**Product 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 Performance Properties**
- 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 up to 260°C continuously and up to 316°C for short periods of time

**Typical Product Data**

**TYPICAL UNCURED PROPERTIES**

	RTV566A	RTV566B
Colour	Red	Yellow Brown
Viscosity, mPa.s	42,700	N/A
Density, g/cm <sup>3</sup>	1.49	1.15

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

	RTV566
Application Rate, g/min (45 minutes after mixing) (3.2 mm orifice, 6.3 bar )	180
Work Life, Hrs.	1.5
Tack Free Time, Hrs.	2.2

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

Hardness, Shore A Durometer	61
Tensile Strength, MPa	5.6
Elongation, %	120
Lap Shear Strength, MPa (on primed Al)	3.3
Volatile Condensable Material, %*	0.02
Total Weight Loss, %*	0.14

\* After 24 hrs. @ 125C and 1 x 10<sup>-6</sup> Torr

**Specifications** Typical product data values should not be used as specification. Assistance and specifications are available by contacting Momentive performance materials Technical Service RTV1 and RTV2.

**Instructions for  
Use**

**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 gram 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 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. 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 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 and 50% relative humidity.

If this RTV silicone rubber compound is to be used at temperatures over 150°C, 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 and an additional eight hours at each 28°C 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 GE Silicones 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.

**Handling and  
Safety**

Material Safety Data Sheets are available upon request from Momentive performance materials. Similar information for solvents and other chemicals used with the Momentive performance materials products should be obtained from your supplier. When solvents are used, proper safety precautions must be observed.

**Storage and  
Warranty Period**

The warranted shelf life will be indicated by the 'use before date' on the associated documents with a minimum of 4 months when stored in the original unopened containers at -18°C. Shipment is allowed at ambient temperatures up to 60°C for a maximum of 7 days.

**Availability** RTV566 is available in 454 gram kits



PRINCIPAL LOCATIONS – Regional Information

North America	World Headquarters 187 Danbury Road Wilton, CT 06897, USA	T 800.295.2392	F 607.754.7517
Latin America	Rodovia Eng. Constâncio Cintra, Km 78,5 Itatiba, SP – 13255-700, Brazil	T +55.11.4534.9650	F +55.11.4534.9660
Europe, Middle East, Africa and India	D-51368 Leverkusen Germany	T 00.800.4321.1000 T +31.164.293.276	F +31.164.241.750
Pacific	Akasaka Park Building - 5-2-20 Akasaka Minato-ku, Tokyo 107-6112 Japan	T +81.3.5544.3100	F +81.3.5544.3101

CUSTOMER SERVICE CENTERS

North America	Charleston, WV 25314, USA E <a href="mailto:cs-na.silicones@momentive.com">cs-na.silicones@momentive.com</a>		
	• Specialty Fluids	T 800.523.5862	F 304.746.1654
	• UA, Silanes, Resins, and Specialties	T 800.334.4674	F 304.746.1623
	• RTV Products-Elastomers	T 800.332.3390	F 304.746.1623
	• Sealants and Adhesives & Construction	T 877.943.7325	F 304.746.1654
Latin America	E <a href="mailto:cs-la.silicones@momentive.com">cs-la.silicones@momentive.com</a>		
	• Argentina & Chile	T +54.11.4862.9544	F +54.11.4862.9544
	• Brazil	T +55.11.4534.9650	F +55.11.4534.9660
	• Mexico & Central America	T +52.55.5899.5135	F +52.55.5899.5138
	• Venezuela, Ecuador, Peru, Colombia, & Caribbean	T +58.212.285.2149	F +58.212.285.2149
Europe, Middle East, Africa and India	E <a href="mailto:cs-eur.silicones@momentive.com">cs-eur.silicones@momentive.com</a>	T 00.800.4321.1000 T +31.164.293.276	F +31.164.241750
	E <a href="mailto:cs-ap.silicones@momentive.com">cs-ap.silicones@momentive.com</a>		
Pacific	• Japan	T +81.276.20.6182	
	• China	T +86.21.5050.4666 (ext. 1523)	
	• Korea	T +82.2.6201.4600	
	• Singapore	T +65.6220.7022	
Worldwide Hotline	Worldwide Web <a href="http://www.momentive.com">www.momentive.com</a>	T 800.295.2392 T +607.786.8131	F +607.786.8309

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