

RTV6136-D1 , RTV 6139-D1

**RTV6130 Series**

**Product Description** The RTV6130 series silicone gels are low viscosity, two component, liquid silicones that cure to form a very soft, gel-like elastomer. The RTV6130 series silicone gels have been specifically formulated to offer superior cured strength characteristics versus conventional silicone gels. The improved strength of these products, when combined with their fast room temperature cure profile, makes them ideal for a variety of E/E & HEPA applications. These gels are available in clear and blue formulations.

**Key Performance Properties**

- Superior tear resistance properties
- Fast room temperature cure times
- Primerless adhesion to many substrates
- Low shrinkage, non-exothermic cure
- Low volatility & weight loss properties
- Removable & repairable
- Convenient 1:1 mix ratio
- Extended low/high temperature stability
- Resistant to fungi growth
- Low toxicity, solventless formulation

**Typical Product Data**

RTV6136-D1	Clear, Transparent
RTV6139-D1	Blue, Transparent
<b>Uncured Properties</b>	<b>(mixed 1:1 by weight)</b>
Viscosity, mPa.s (@25°C)	750
Density, g/cm <sup>3</sup>	0.98
Work Life, minutes (@25°C)	30
<b>Cured Properties</b>	<b>(1:1 cured 30 minutes at 150 C)</b>
Penetration (mm)	6.5
Volatility, % (@25°C)	< 1.0
Useful Temperature Range	-50 to + 204 °C
Refractive Index	1.406

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

**Instructions for Use**   **Compatibility**

The RTV6130 series silicone gels will cure in contact with most clean and dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulphur-containing materials, amines, and certain metal soap cured RTV silicone rubber compounds can cause cure inhibition. The use of latex gloves will also cause cure inhibition. Cure inhibition is characterized by a lack of cure of the silicone gel at the interface between it and the substrate. Severe inhibition may result in no cure. Compatibility tests should be performed on all materials in contact with the uncured gel, 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 RTV6130 series silicone gels and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the silicone gel. Particular attention should be given to these areas, which will come in direct contact with the gel during the curing process.

**Bonding**

The RTV6130 series silicone gels offer excellent, reform able, pressure sensitive adhesion characteristics to a wide variety of different substrates without the need of a primer.

For difficult-to-bond-to substrates, or where more aggressive chemical adhesion is desired, the adhesion may be enhanced by using SS4155 silicone primer, available from Momentive performance materials Silicones. To apply the primer, thoroughly clean the surface and let dry. Then apply a uniform film (0.01-0.02 mm / 0.5-1.0 mil) of SS4155 silicone primer and allow the primer to air-dry for one hour or more. When dry, SS4155 silicone primer exhibits a white haze which will show through the silicone gel. If the appearance of the surface to be bonded must be unchanged (transparent), SS4120 silicone primer, also available from Momentive performance materials may be used. For more details on priming and adhesion, please refer to Momentive performance materials product data sheet on silicone primers.

**Mixing**

The RTV6130 series silicone gels are kit-matched products. As such, work time (pot-life), cure time, and final cured properties can only be assured if the batch numbers on the A component and B component are identical and the material is mixed at a ratio of 1:1 (by weight).

Due to their short work life, mixing of these gels for use in continuous or high volume production environments should be done via automated meter/static-mix dispensing equipment. The use of dynamic mixing equipment is not recommended.

For small quantities of gel, which is to be used immediately, hand mixing can be done. To hand mix, select a clean mixing container 4-5 times larger than the volume of RTV silicone gel to be used. Weigh out equal amounts of the A & B components. With clean tools, thoroughly mix the A & B components together, scraping the sides and bottom of the container carefully to produce a homogeneous mixture. Care should be taken to minimize the amount of air entrapment.

Vacuum deaeration (10-30 mbar) can be used to remove entrapped air from the uncured mixture.

The final cured properties of the RTV6130 series silicone gels can be altered by changing the mix ratio of the two components. Increasing the ratio of Part A to Part B will yield a softer gel (i.e. higher penetration value). Likewise, decreasing the ratio of Part A to Part B will result in a gel with a lower penetration value. Deviations greater than 10% from the standard 1:1 mix ratio are not recommended. Changes to the mix ratio will affect the pot-life of the catalyzed mixture and to some extent, the cured physical properties.

#### **Equipment**

Automatic equipment designed to meter, mix, and dispense two-component RTV silicone gels will add convenience and reliability to continuous or large volume operations. Due to its extremely short work life (pot-life), automated equipment is strongly recommended when using RTV6130 series silicone gels.

#### **Curing**

##### **Cure Temperature Cure Time**

25°C	4 hours
50°C	2 hours
100°C	20 minutes
150°C	10 minutes

##### **When used, ovens must be well ventilated.**

Cure times are only approximate. The actual time is affected by the mass of the applied gel and the time required to reach the desired temperature.

#### **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.

##### **CAUTION**

The curing agent ("B" component) of the RTV6130 series silicone gels can generate flammable hydrogen gas upon contact with acidic, basic, or oxidizing materials. Such contact should be avoided.

#### **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 below 25° C.

#### **Availability**

RTV6136-D1 and RTV6139-D1 are available as 080K 36.3 kg kit and 800K 363 kg kit.



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. Constância 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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