



RTV6139-D1

Description

RTV6136-D1 and RTV6139-D1 silicone gels are low viscosity, two component, liquid silicones which cure to form a very soft, gel-like elastomer. RTV6136-D1 and RTV6139-D1 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 colored formulations.

Key Features and Benefits

- 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
- Available in colors for easy visual inspection

Typical Physical Properties

RTV6136-D1	Clear, Transparent
RTV6139-D1	Blue, Transparent
Uncured Properties (mixed 1:1 by weight)	
Viscosity, cps (@25°C)	750
Specific Gravity	0.98
Work Life, minutes (@25°C)	30
Cured Properties (1:1, cured 30 minutes at 150° C)	
Penetration, mm	6.5
Volatility, % (@25°C)	< 1.0
Useful Temperature Range	-50 to +204°C
Refractive Index	1.406

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a 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

CAUTION

The curing agent ("B" component) of RTV6136-D1 and RTV6139-D1 silicone gels can generate flammable hydrogen gas upon contact with acidic, basic, or oxidizing materials. Such contact should be avoided.

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.

Processing Recommendations

Compatibility

RTV6136-D1 and RTV6139-D1 silicone gels will cure in contact with most clean and dry surfaces. However, certain materials, such as butyl and chlorinated rubber, sulfur-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 RTV6136-D1 and RTV6139-D1 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

RTV6136-D1 and RTV6139-D1 silicone gels offer excellent, reformable, 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. 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.

Mixing

RTV6136-D1 and RTV6139-D1 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 (25 mm mercury) can be used to remove entrapped air from the uncured mixture.

The final cured properties of RTV6136-D1 and RTV6139-D1 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 RTV6136-D1 and RTV6139-D1.

Curing

<u>Cure Temperature</u>	<u>Cure Time</u>
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 SILICONE GEL AND THE TIME REQUIRED TO REACH THE DESIRED TEMPERATURE.

Limitations

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

Contact Information

For product prices, availability, or order placement, contact our customer service by visiting momentive.com/ContactSilicones.

For literature and technical assistance, visit our website at: www.momentive.com

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