

RTV6424

Description

RTV6424 and RTV6445 silicone adhesives are one-component heat curable silicone adhesive sealants which will bond to many substrates without a primer and which will cure rapidly at elevated temperatures. These products have a very long working time at room temperature but will not cure completely until exposed to elevated temperatures.

RTV6424- is a white, paste like product with a small amount of vertical flow

RTV6445- is a white, thixotropic paste consistency product which can be applied to vertical or overhead surfaces.

Key Features and Typical Benefits

- One component products - no mixing required
- Fast cure at elevated temperature
- Primerless adhesion to many types of substrates
- No cure by-products, low linear shrinkage
- Non-corrosive to metals and sensitive substrates
- Excellent dielectric properties
- Outstanding performance over a wide thermal range

Typical Physical Properties

<u>Property</u>	<u>Unit</u>	<u>Value</u>	
		RTV6424	RTV6445
Uncured Properties			
Color		White	White
Viscosity	cps	N/A	N/A
Specific Gravity		1.17	1.20
Vertical Flow, inches at 5 mins		2	0.2
Application Rate, grams/minute		150	50
Cured Properties (cured 1 hour at 150 °C)		RTV6424	RTV6445
Durometer, Shore A		30	38
Elongation	%	550	625
Tensile Strength	psi	675	875
Tear Strength, Die B	lb./in.	80	140

Typical physical properties are average data and should not be used as or to develop product specifications.

Typical Physical Properties continued

<u>Property</u>	<u>Unit</u>	<u>Value</u>	
Adhesion (al to al)	psi	300	325
Dielectric Strength	volts/mil	500	500
Dielectric Constant		2.9	2.9
Dissipation Factor		0.003	0.003
Volume Resistivity	$\Omega \cdot \text{cm}$	1.0×10^{15}	1.0×10^{15}

Typical physical properties are average data and should not be used as or to develop product specifications.

Processing Recommendations

Compatibility

RTV6424 and RTV6445 silicone adhesives will cure in contact with most clean, 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. Cure inhibition is characterized by a gummy appearance of the RTV6424 and RTV6445 silicone adhesives at the interface between the adhesive and the substrate to be bonded. It is recommended that a sample patch test be performed with the RTV6424 and RTV6445 silicone adhesives to determine substrate compatibility.

Surface Preparation

The adhesive performance of any polymer system is highly dependent upon proper surface preparation. In order to maximize the adhesion of RTV6424 and RTV6445 silicone adhesives and minimize the potential for cure inhibition, all parts should be as clean and dry as possible prior to the application of the adhesive.

Bonding

RTV6424 and RTV6445 silicone adhesives offer outstanding 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. For more details on priming and adhesion, please refer to Momentive Performance Materials product data sheet on silicone primers (CDS1873).

Curing

RTV6424 and RTV6445 silicone adhesives requires the use of elevated temperatures in order to achieve full cure. Typical cure times and temperatures are as follows:

Temperature	RTV6424/RTV6445
125 °C / 257 °F	45 minutes
150 °C / 302 °F	30 minutes

Note: Test data. Actual results may vary.

The actual cure time is affected by such things as cross-sectional thickness of the RTV6424 and RTV6445 silicone adhesives, heat capacity of the overall assembly and efficiency and type of oven used (i.e. convection, infrared)

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

Caution

RTV6424 and RTV6445 silicone adhesives can generate flammable hydrogen gas upon contact with acidic, basic, or oxidizing materials. Such contact should be avoided.

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 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.

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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