



RTV6445

RTV6445

Description

RTV6424, RTV6445 and TSE322 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.

TSE322- is a light blue, flowable material with self-leveling properties.

TSE322B- is a black, flowable material with self-leveling properties.

Key Features and 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

Uncured Properties	RTV6424	RTV6445	TSE322	TSE322B
Color	White	White	Lt Blue	Black
Viscosity, cps	N/A	N/A	150,000	150,000
Specific Gravity	1.17	1.20	1.28	1.28
Vertical Flow, inches @ 5 mins	2	0.2	N/A	N/A
Application Rate, grams/minute	150	50	N/A	N/A
Cured Properties(cured 1 hour at 150°C)	RTV6424	RTV6445	TSE322	TSE322B
Durometer, Shore A	30	38	45	45
Elongation, %	550	625	200	200
Tensile Strength, psi	675	875	425	425
Tear Strength, lb./in, Die B	80	140	-	-
Adhesion, psi (al to al)	300	325	300	300
Dielectric Strength, volts/mil	500	500	500	500
Dielectric Constant	2.9	2.9	3.1	3.1

Dissipation Factor	0.003	0.003	0.006	0.006
Volume Resistivity,ohm-cm	1 x 10 ¹⁵	1 x 10 ¹⁵	1 x 10 ¹⁴	1 x 10 ¹⁴

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

RTV6424, RTV6445 and TSE322 silicone adhesives can generate flammable hydrogen gas upon contact with acidic, basic, or oxidizing materials. Such contact should be avoided.

The warranty period for RTV6424, RTV6445, TSE322 and TSE322B silicone adhesives is 6 months from date of shipment from Momentive Performance Materials if stored in the original unopened containers at temperatures between 35F and 50F (1C to 10C).

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

RTV6424, RTV6445 and TSE322 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, RTV6445 and TSE322 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, RTV6445 and TSE322 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, RTV6445 and TSE322 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, RTV6445 and TSE322 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, RTV6445 and TSE322 silicone adhesives requires the use of elevated temperatures in order to achieve full cure. Typical cure times and temperatures are as follows:

Temperature 100C/212F125C/257F150C/302F	RTV6424/RTV6445N/A 45 minutes30 minutes	TSE322/TSE322B3 hours45 minutes30 minutes
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The actual cure time is affected by such things as cross-sectional thickness of the RTV6424, RTV6445 and TSE322 silicone adhesives, heat capacity of the overall assembly and efficiency and type of oven used (i.e. convection, infrared)

Limitations

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

From automotive to healthcare, from electronics to construction, products from Momentive Performance Materials Inc. are practically everywhere you look. We are a global leader in silicones and advanced materials with a 70+ year heritage of innovation and being first to market – with performance applications that improve everyday life. By knowing our customers' needs and creating custom technology platforms for them, we provide science based solutions to help customers increase performance, solve product development issues and engineer better manufacturing processes.

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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