# 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

| Property | Unit | Value | |
|---|---|---|---|
| **Uncured Properties** | | **RTV6424** | **RTV6445** |
| 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

| Property | Unit | Value | |
|---|---|---|---|
| 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 | Ω·cm | $1.0 \times 10^{15}$ | $1.0 \times 10^{15}$ |

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 ºC / 257 ºF | 45 minutes |
| 150 ºC / 302 ºF | 30 minutes |

Note: Test data.  Acutal 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.

**Contact Information**
For product prices, availability, or order placement, contact our customer service at Momentive.com/CustomerService/

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

**DISCLAIMER:**

**THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY "SUPPLIER"), ARE SOLD SUBJECT TO SUPPLIER'S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER'S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN**. Each user bears full responsibility for making its own determination as to the suitability of Supplier's materials, services, recommendations, or advice for its own particular use. Each user must identify and

perform all tests and analyses necessary to assure that its finished parts incorporating Supplier's products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier's standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.