MOMENTIVE
performance materials

# *Material Safety Data Sheet*

Version: 1.7
06/20/2008

## RTV108 12C-CRTRG(0.320KG)-R
## ACETOXY SEALANT (translucent)

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Manufactured By:** **Waterford Plant**
**260 Hudson River Rd**
**Waterford NY 12188**
**Revised:** 06/20/2008
**Preparer:** PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
**CHEMTREC** 1-800-424-9300

**Chemical Family/Use:** Sealant
**Formula:** MixtureSilicone sealant

**HMIS**

| | | | | | |
|---|---|---|---|---|---|
| Flammability: | 1 | Reactivity: | 0 | Health: | 1 |

**NFPA**

| | | | | | |
|---|---|---|---|---|---|
| Flammability: | 1 | Reactivity: | 0 | Health: | 2 |

## 2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**
WARNING! May be harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause adverse reproductive effects. Adverse liver and reproductive effects reported in animals.
Form: Solid Color: Translucent Odor: vinegar-like

**POTENTIAL HEALTH EFFECTS**

**INGESTION**
May be harmful if swallowed.

**SKIN**
Uncured product contact will irritate lips, gums and tongue. Skin irritation is possible after contact with the uncured product.

**INHALATION**
Inhalation of vapors may cause irritation of the respiratory tract. Applies in uncured state.

**EYES**
Eye irritation is possible after contact with the uncured product.

**MEDICAL CONDITIONS AGGRAVATED**
None known.

**SUBCHRONIC (TARGET ORGAN )**
Liver; Reproductive hazard.

**CHRONIC EFFECTS / CARCINOGENICITY**
This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or

suspected carcinogen by NTP, IARC, or OSHA.

**ROUTES OF EXPOSURE**
Dermal; Eyes

**OTHER**
Contains octamethylcyclotetrasiloxane which may cause reproductive effects based on animal data.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| PRODUCT COMPOSITION | CAS REG NO. | WGT. % |
|---|---|---|
| **A. HAZARDOUS** | | |
| METHYLTRIACETOXYSILANE | 4253-34-3 | 1 - 5 % |
| Octamethylcyclotetrasiloxane | 556-67-2 | 1 - 5 % |
| **B. NON-HAZARDOUS** | | |
| Siloxanes & Silicones, Dimethylpolymers w/Methylsilsesquioxanes | 68554-67-6 | 5 - 10 % |
| Treated Filler | 68611-44-9 | 10 - 30 % |
| dimethylpolysiloxane | 70131-67-8 | 60 - 100 % |

## 4. FIRST AID MEASURES

**INGESTION**
Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

**SKIN**
Wash with soap and water. Get medical attention if irritation or symptoms from Section 3 develop.

**INHALATION**
If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

**EYES**
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**NOTE TO PHYSICIAN**
None known.

## 5. FIRE-FIGHTING MEASURES

| | |
|---|---|
| **FLASH POINT:** | > 93.3 °C; 200 °F |
| **METHOD:** | estimated |
| **IGNITION TEMPERATURE:** | No data available |
| **FLAMMABLE LIMITS IN AIR - LOWER (%):** | Not applicable |
| **FLAMMABLE LIMITS IN AIR - UPPER (%):** | Not applicable |

**SENSITIVITY TO MECHANICAL IMPACT:** No

**SENSITIVITY TO STATIC DISCHARGE**
Sensitivity to static discharge is not expected.

**EXTINGUISHING MEDIA**
All standard extinguishing agents are suitable.

**SPECIAL FIRE FIGHTING PROCEDURES**
Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**
Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

## 7. HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**
Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas. Avoid accidental ingestion of this material. Wash hands and face before eating, drinking, smoking, using toilet facilities, or applying cosmetics. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation. Store away from heat, sources of ignition, and incompatibles. Keep away from children. Keep container closed when not in use.

**STORAGE**
Keep containers tightly closed in a cool, well-ventilated place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS**
Eyewash stations; Showers; Exhaust ventilation

**RESPIRATORY PROTECTION**
If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

**PROTECTIVE GLOVES**
Solvent-resistant gloves (butyl-rubber)

**EYE AND FACE PROTECTION**
Safety glasses with side-shields

**OTHER PROTECTIVE EQUIPMENT**
Wear suitable protective clothing and eye/face protection.

**Exposure Guidelines**

| Component | CAS RN | Source | Value |
|---|---|---|---|
| Octamethylcyclotetrasiloxane | 556-67-2 | Z_INTL_OEL, REL | 5 ppm |

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **BOILING POINT - C & F:** | Not applicable |
| **VAPOR PRESSURE (20 C) (MM HG):** | Unknown |
| **VAPOR DENSITY (AIR=1):** | No data available |
| **FREEZING POINT:** | Not applicable |
| **MELTING POINT:** | Not applicable |
| **PHYSICAL STATE:** | Solid |
| **ODOR:** | vinegar-like |

| | |
|---|---|
| **COLOR:** | Translucent |
| **EVAPORATION RATE (BUTYL ACETATE=1):** | Unknown |
| **SPECIFIC GRAVITY (WATER=1):** | 1.06 |
| **DENSITY:** | ca. 1.06 g/cm3 |
| **ACID / ALKALINITY (MEQ/G):** | No data available |
| **pH:** | No data available |
| **VOLATILE ORGANIC CONTENT (VOL):** | 0.25 %(m) |
| **SOLUBILITY IN WATER (20 C):** | Unknown |
| **SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):** | Toluene |
| **VOC EXCL. H2O & EXEMPTS (G/L):** | ca. 23 |

## 10. STABILITY AND REACTIVITY

**STABILITY**
Stable

**HAZARDOUS POLYMERIZATION**
Will not occur

**HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS**
Carbon dioxide (CO2); Carbon monoxide; Acetic acid; Silicon dioxide.; Formaldehyde; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150'C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

**INCOMPATIBILITY (MATERIALS TO AVOID)**
None known.

**CONDITIONS TO AVOID**
None known.

## 11. TOXICOLOGICAL INFORMATION

**ACUTE ORAL**
Remarks: No data available

**ACUTE DERMAL**
Remarks: No data available

**ACUTE INHALATION**
Remarks: NONE FOUND

**OTHER**

Octamethylcyclotetrasiloxane Ingestion: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size). Inhalation: In inhalation studies, laboratory rodents exposed to octamethylcyclotetrasiloxane (300 ppm five days week, 90 days)developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liverweights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalationstudies utililizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical ofindustrial usage (5-10 ppm) showed no toxic effects in rodents. Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestationand lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there wasa statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observedin the pups and no exposure related pathological findings were found. Interim results from a two generation reproductive study in rats exposed to 500 and 700 ppm D4 (whole body inhalation, 70 daysprior to mating, through mating, gestation and lactation) resulted in a statistically significant decrease in live meanlitter size as well as extended periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300ppm dosing levels. Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150, or700 ppm D4 showed test-article related effects in the kidney (male and female) and uterus of rats exposed for 12 to 24 months. These effects include increased kidney weight and severity of chronic nephropathy, increased uterine weight,increased incidence of endometrial cell hyperplasia, and an increased incidence of endometrial adenomas. All of theseeffects are limited to the 700 ppm exposure group. These results have been shown to be rat-specific. Further studies are ongoing. In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppmand 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study., Contains dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

**SENSITIZATION**

No data available

**SKIN IRRITATION**

No data available

**EYE IRRITATION**

No data available

**MUTAGENICITY**

Unknown

**OTHER EFFECTS OF OVEREXPOSURE**

Acetic acid released during curing., Contains octamethylcyclotetrasiloxane which may cause reproductive effects based on animal data.

## 12. ECOLOGICAL INFORMATION

**ECOTOXICITY**

Ecotoxicological data for this product is not available.

**DISTRIBUTION**
No data available
**CHEMICAL FATE**
No data available

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD**
Disposal should be made in accordance with federal, state and local regulations.

## 14. TRANSPORT INFORMATION

**Further Information:** This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

## 15. REGULATORY INFORMATION

### Inventories

| | |
|---|---|
| Canada DSL Inventory | y (Positive listing) |
| Japan Inventory of Existing & New Chemical Substances (ENCS) | y (Positive listing) |
| Korea Existing Chemicals Inventory (KECI) | y (Positive listing) |
| China Inventory of Existing Chemical Substances | y (Positive listing) |
| Australia Inventory of Chemical Substances (AICS) | y (Positive listing) |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | y (Positive listing) |
| EU list of existing chemical substances | y (Positive listing) |
| Canada NDSL Inventory | n (Negative listing) |

| | | |
|---|---|---|
| TSCA list | y (Positive listing) | On TSCA Inventory |

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

## US Regulatory Information

**CERCLA**

| PRODUCT COMPOSITION | Chemical | CERCLA Reportable Quantity |
|---|---|---|
| Acetic acid | 64-19-7 | Reportable quantity: 5,000 LBS |

**SARA (311,312) HAZARD CLASS**

Acute Health Hazard; Chronic Health Hazard

**SARA (313) CHEMICALS**

**CALIFORNIA PROPOSITION 65**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

## Canadian Regulatory Information

**WHMIS HAZARD CLASS**

D2A - Very Toxic Material Causing Other Toxic Effects
D2B - Toxic Material Causing Other Toxic Effects

## 16. OTHER INFORMATION

**OTHER**

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate., C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R = recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2).

MOMENTIVE™

Technical Data Sheet

# RTV100 Series

## RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116, RTV118 Adhesive Sealants

### Description

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 one-component, ready-to-use adhesive sealants are extremely versatile. They cure to a tough, durable, resilient silicone rubber on exposure to atmospheric moisture at room temperature. Acetic acid vapors are released from the sealant surface as a by-product of cure.

RTV102, RTV103, RTV108 and RTV109 sealants are standard strength paste consistency products which can be applied to vertical and overhead surfaces where pourable/self-leveling sealants are not practical.

RTV112 and RTV118 sealants are self-leveling products which are preferable to paste-consistency sealants when flow into small crevices and hard-to-reach places is desired.

RTV106 sealant is paste-consistency sealant. RTV116 sealant is a self-leveling sealant. Both RTV106 and RTV116 sealants are standard strength high-temperature sealants.

Since all these sealants utilize a moisture cure system, they must not be used in thicknesses of greater than 6mm (1/4 in.).

Where section depths exceed 6mm (1/4 in.), Momentive Performance Materials one component, addition cure or two-component silicone rubber compounds are recommended.

### Key Features and Benefits

- One-component products
- Capability to cure at room temperature and ambient humidity
- Self adhesion properties
- Low temperature flexibility
- High temperature performance
- Excellent weatherability and ozone and chemical resistance
- Excellent electrical insulation properties

### Typical Physical Properties

| **Uncured Properties** | **RTV102**<br>**RTV103**<br>**RTV108**<br>**RTV109** | **RTV106** | **RTV116** | **RTV112**<br>**RTV118** |
|---|---|---|---|---|
| Consistency | Paste | Paste | Self leveling | Self leveling |
| Color | RTV102: White<br>RTV103: Black<br>RTV108: Translucent<br>RTV109: Aluminum | Red | Red | RTV112: White<br>RTV118: Translucent |
| Viscosity, poises | – | – | 250 | 200 |

| | | | | |
|---|---|---|---|---|
| Application Rate,(g/min) | 400 | 400 | – | – |
| Specific Gravity | 1.05 | 1.07 | 1.09 | 1.05 |
| Tack-Free Time, minutes | 20 | 20 | 30 | 20 |
| **Cured Properties**[1] | **RTV102<br>RTV103<br>RTV108<br>RTV109** | **RTV106** | **RTV116** | **RTV112<br>RTV118** |
| **Mechanical:** | | | | |
| Tensile Strength,kg/cm$^2$ (lb/in$^2$) | 28 (400) | 26 (375) | 25 (350) | 23 (325) |
| Elongation, % | 450 | 400 | 350 | 325 |
| Hardness, Shore A | 30 | 30 | 20 | 25 |
| Tear Strength,kg/cm (lb/in) | 8 (45) | 7 (40) | – | – |
| Shear Strength, kg/cm$^2$ (lb/in$^2$)[2] | 14 (200) | 14 (200) | 7 (125) | 7 (100) |
| Peel Strength, kg/cm (lb/in)[3] | 7 (40) | 7 (40) | 3 (25) | 3 (15) |
| **Electrical:** | | | | |
| Dielectric Strength,kv/mm (v/mil) | 20 (500) | 20 (500) | 16 (400) | 16 (400) |
| Dielectric Constant@ 60 Hz | 2.8 | 2.8 | 2.8 | 2.8 |
| Dissipation Factor@ 60 Hz | 0.001 | 0.001 | 0.001 | 0.001 |
| Volume Resistivity, ohm-cm | $3x10^{15}$ | $3x10^{14}$ | $2x10^{14}$ | $6x10^{14}$ |
| **Thermal:**[4] | | | | |
| Brittle Point, °C (°F) | -60 (-75) | -60 (-75) | -60 (-75) | -60 (-75) |
| Maximum continuous operating temperature, °C (°F) | 204 (400) | 260 (500) | 260 (500) | 204 (400) |
| Maximum intermittent operating temperature, °C (°F) | 260 (500) | 315 (600) | 315 (600) | 260 (500) |
| **Additional Information:**[4] | | | | |
| Linear Shrinkage, % | 1.0 | 1.0 | 1.0 | 1.0 |
| Thermal Conductivity, cal/sec/cm$^2$, °C/cm | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| (Btu/hr/ft$^2$, °F/ft) | (0.12) | (0.12) | (0.12) | (0.12) |
| Coefficient of Expansion cm/cm, °C | $27x10^{-5}$ | $27x10^{-5}$ | $27x10^{-5}$ | $27x10^{-5}$ |
| (in/in, °F) | ($15x10^{-5}$) | ($15x^{-5}$) | ($15x^{-5}$) | ($15x^{-5}$) |

(1) Cure time 3 days at 25°C (77°F) / 50% relative humidity.

(2) At 100% cohesive failure.

(3) At 100% cohesive failure using 1 in. x 8 in. stainless steel screen at 180° pull angle.

(4) Information is provided for customer convenience only. These properties are not tested on a routine basis.

## Potential Applications

| Product | Features | Potential Applications | UL | Food Contact |
|---|---|---|---|---|
| RTV102 (White)<br>RTV103 (Black)<br>RTV108 (Translucent)<br>RTV109 (Aluminum) | General purpose pastes | General purpose bonding, sealing, electrical insulation, formed-in-place gaskets. Can be applied to vertical or overhead surfaces. | File 36952 | FDA 21 CFR 177.2600, USDA, NSF International Std. No. 51 |
| | | Sealing heating elements, gasketing, | | |

| | | | | |
|---|---|---|---|---|
| RTV106 (Red) | High temperature paste | electrical insulation, and other critical bonding and sealing applications where parts must perform at high temperatures. Can be applied to vertical or overhead surfaces. | File 36952 | FDA 21 CFR177.2600, USDA, NSF International Std. No. 51 |
| RTV116 (Red) | High temperature | Thin section potting, filling small surface voids, self leveling protective coating, electrical insulation where high temperature performance is required. | File 36952 | FDA 21 CFR 177.2600, USDA, NSF International Std. No. 51 |
| RTV112 (White) RTV118 (Translucent) | General purpose | Electrical insulation, thin section potting, self leveling protective coatings. Will flow into small crevices and hard to reach places. | File 36952 | FDA 21 CFR 177.2600, USDA, NSF International Std. No. 51 |

These sealants were not designed for and should not be used for applications intended for permanent implantation into the human body.

These sealants are not for use in delicate electrical and electronic applications in which corrosion of copper, brass or other sensitive metals is undesirable.

## 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

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

### Surface Preparation

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants will bond to many clean surfaces without the aid of primers. These surfaces typically include many metals, glass, ceramic, silicone rubber and some rigid plastics. These adhesive sealant products will also produce fair bonds to organic rubber and to some flexible plastics not containing fugitive plasticizers (which migrate to the surface, impairing adhesion). An evaluation should be made to determine bond strength for each specific application. For difficult-to-bond substrates, use of a primer is suggested. Primers SS4004, SS4044 and SS4179 are recommended for use with these sealants. Complete information and usage instructions for these primer products are contained in a separate product data sheet.

Where adhesion is required, surfaces should be thoroughly cleaned with a suitable solvent such as naphtha or methyl ethyl ketone (MEK) to remove dirt, oil and grease. The surface should be wiped dry before applying the adhesive sealant.

When solvents are used, proper safety precautions must be observed.

### Application and Cure Time Cycle

Paste-consistency products may be applied directly to clean or primed substrates. Where broad surfaces are to be mated, the sealant should be applied in a thin, less than 6mm (1/4 in.) diameter, bead or ribbon around the edge of the surface to be bonded.

Flowable products may be applied to clean or primed substrates by pouring directly from the original container or dipping. These products will self-level on a surface, filling small crevices and surface voids. Depth of potted sections should not exceed 6mm (1/4 in.).

The cure process begins with the formation of a skin on the exposed surface of the sealant and progresses inward through the material. At 25°C (77°F) and 50% relative humidity, RTV102, RTV103, RTV106, RTV108, RTV109, RTV112 and RTV116 sealants will form a surface skin which is tack-free to the touch in 15 to 30 minutes. Once the tack-free skin has begun to form, further tooling of the adhesive sealant is not advisable.

Higher temperatures and humidity will accelerate the cure process low temperatures and low humidity will slow the cure rate.

As the adhesive sealant cures, acetic acid vapors are released from the sealant surface. The odor of acetic acid will completely disappear when curing is completed.

A 3mm (1/8 in.) section of adhesive sealant will cure through in approximately 24 hours at 25°C (77°F) and 50% R.H. Since cure time increases with thickness, use of these adhesive sealants should be limited to section thicknesses of 6mm (1/4 in.) or less.

### Bond Strength Development

In addition to the effects of temperature and relative humidity, development of maximum bond strength will depend on joint configuration, degree of confinement, sealant thickness and substrate porosity. Normally, sufficient bond strength will develop in 12 to 24 hours to permit handling of parts. Minimum stress should be applied to the bonded joint until full adhesive strength is developed. Eventually the adhesive strength of the bond will exceed the cohesive strength of the silicone rubber sealant itself. Always allow maximum cure time available for best results.

### PACKAGING AND DISPENSING

RTV adhesive sealants from Momentive Performance Materials are supplied ready-to-use in collapsible aluminum squeeze tubes, caulking cartridges and in bulk containers.

Collapsible aluminum tubes may be squeezed by hand or with the aid of mechanical wringers which allow more complete removal of material from the tube. Air-operated dispensing guns may also be used with aluminum tubes and offer the advantages of improved control and faster application for production line use. The sealant may be dispensed from caulking cartridges by using simple mechanical caulking guns or air-operated guns. Air-operated guns will allow greater control and application speed. Both tubes and cartridges are easy to use, can be put into production quickly and require minimal capital investment.

**Note:** Do not exceed 45 psig when used in air-powered caulking guns.

Bulk containers require a larger initial investment in dispensing equipment, but offer the most economical packaging for volume production. Bulk dispensing systems are air-operated extrusion pumps coupled to hand or automated dispensing units. Pumps which are specifically designed for pumping one-component RTV silicone rubber have TEFLON® seals, packings and lined hoses to prevent moisture permeation and pump cure problems.

### CLEAN UP AND REMOVAL

Before curing, solvent systems such as naphtha or methyl ethyl ketone (MEK) are most effective. Refer to solvent use warnings in the section on surface preparation.

After cure, selected chemical strippers which will remove the silicone rubber are available from other manufacturers. Specific product information may be obtained on request.

## Limitations

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

## Specifications

### FDA STATUS

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants are compositionally compliant with the requirements of 21 CFR 177.2600 – Rubber articles intended for repeated use and have been found, through testing of a representative sample, to meet the extractives limitations in 21 CFR 177.2600(e) and/or (f).

Note: It is the responsibility of the user to determine that the final product complies with the extractive limitations and other requirements of 21 CFR 177.2600 under their specific manufacturing procedures.

## BIOCOMPATABILITY STATUS

- A representative sample of RTV 108 has passed USP Class VI (United States Pharmacopoeia USP 23, National Formulary 18, 1995).
- A representative sample of RTV 118 has passed USP Class VI (United States Pharmacopoeia USP 23, National Formulary 18, 1995).

## USDA STATUS

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants may be used on equipment which may contact edible products in official establishments operating under the Federal meat and poultry products inspection program. See USDA letter of Authorization.

## NSF INTERNATIONAL STATUS

NSF International lists RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants under NSF International Standard No. 51 (Plastic Materials and Components for Use in Food Equipment), as satisfactory for use on food contact surfaces.

## UL STATUS

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 silicone rubber adhesive sealants are recognized by Underwriters Laboratories, Inc., under their Component Recognition Program (UL File No. E-36952).

## MILITARY SPECIFICATION

MIL-A-46106

| | | |
|---|---|---|
| Group I | Type I | General Purpose Paste: RTV102, RTV103, RTV108, RTV109 |
| | Type II | General Purpose Flowable: RTV112, RTV118 |
| Group III | Type I | High Temperature Paste: RTV106 |
| | Type II | High Temperature Flowable: RTV116 |

Testing for referenced MIL Spec is performed in accordance with current Momentive Performance Materials quality test methods, laboratory conditions, and procedures, frequency and sampling, which are not necessarily identical with the methods, conditions, procedures, frequency and sampling stated or referenced in the listed specification. Any certification will be limited to listed properties and will not imply or state conformity to any other aspect of the referenced specification, including but not limited to marking, packaging, bar coding, testing, or sampling. Contact Momentive Performance Materials for a comparison review.

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