

**RTV 12 A
SILICONE RUBBER****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Manufactured By: Momentive performance material
260 Hudson River Rd
Waterford NY 12188

Revised: 10/14/2010

Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300

Chemical Family/Use: Silicone Elastomer

Formula: Mixture of polydimethylsiloxane, filler and silicone resin.

HMIS

Flammability: 1 Reactivity: 0 Health: 0

NFPA

Flammability: 1 Reactivity: 0 Health: 1

2. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

CAUTION! May cause skin, eye, and respiratory tract irritation. May generate formaldehyde at temperatures greater than 150 C (300 F). See Section 10 of MSDS for details. Attention: Not for injection into humans.

Form: Liquid **Color:** clear **Odor:** None.

POTENTIAL HEALTH EFFECTS**INGESTION**

None known. Not an anticipated route of exposure.

SKIN

Skin contact may cause irritation.

INHALATION

Inhalation of vapors may cause irritation of the respiratory tract.

EYES

May cause eye irritation.

MEDICAL CONDITIONS AGGRAVATED

None known.

SUBCHRONIC (TARGET ORGAN)

None known.

CHRONIC EFFECTS / CARCINOGENICITY

No data available.

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Inhalation

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>PRODUCT COMPOSITION</u>	<u>CAS REG NO.</u>	<u>WGT. %</u>
<u>A. HAZARDOUS</u>		
Octamethylcyclotetrasiloxane	556-67-2	0.1 - 1 %
<u>B. NON-HAZARDOUS</u>		
Dimethylpolysiloxane	70131-67-8	60 - 100 %
MQ Resin [DSL 68988-56-7]	56275-01-5	10 - 30 %

4. FIRST AID MEASURES**INGESTION**

Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

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

Treatment is symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

FLASH POINT: > 148 °C; 298 °F

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IGNITION TEMPERATURE: Not applicable
FLAMMABLE LIMITS IN AIR - LOWER (%): No data available.
FLAMMABLE LIMITS IN AIR - UPPER (%): No data available.

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.

FURTHER INFORMATION
Standard procedure for chemical fires.

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
Keep container closed when not in use. Avoid contact with skin, eyes and clothing. Keep away from children.

STORAGE
Keep container closed. Store away from heat, sources of ignition, and incompatibles.

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

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emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES

Rubber gloves

EYE AND FACE PROTECTION

Safety glasses with side-shields

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

<u>Component</u>	<u>CAS RN</u>	<u>Source</u>	<u>Value</u>
Toluene	108-88-3	ACGIH, TWA	20 ppm
Toluene	108-88-3	OSHA Z2, TWA	200 ppm
Toluene	108-88-3	OSHA Z2, Ceiling	300 ppm
Toluene	108-88-3	OSHA Z2, MAX. CONC	500 ppm
Toluene	108-88-3	ACGIH,	Listed.
Toluene	108-88-3	OSHA Z2,	Listed.

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:	>260 °C; 500 °F
VAPOR PRESSURE (20 C) (MM HG):	negligible
VAPOR DENSITY (AIR=1):	1.0
FREEZING POINT:	Not applicable
PHYSICAL STATE:	Liquid
ODOR:	None.
COLOR:	clear
EVAPORATION RATE (BUTYL ACETATE=1):	< 1
SPECIFIC GRAVITY (WATER=1):	1.02
DENSITY:	ca. 1,020 g/cm ³
ACID / ALKALINITY (MEQ/G):	No data available.
pH:	No data available.
SOLUBILITY IN WATER (20 C):	negligible
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	Toluene
VOC EXCL. H2O & EXEMPTS (G/L):	1.5 g/l

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10. STABILITY AND REACTIVITY**STABILITY**

Stable

HAZARDOUS POLYMERIZATION

Hazardous polymerisation does not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS

Carbon monoxide; Carbon dioxide (CO₂); 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: No data available.

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. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial 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, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in

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mean litter size and in implantation sites. No D4 related clinical signs were observed in 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 days prior to mating, through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended periods of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels. Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150, or 700 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 these effects 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 ppm and 500 ppm respectively. No teratogenic effects (birth defects) were observed in either study.

SENSITIZATION

No data available.

SKIN IRRITATION

No data available.

EYE IRRITATION

No data available.

MUTAGENICITY

No data available.

OTHER EFFECTS OF OVEREXPOSURE

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., Attention: Not for injection into humans., Octamethylcyclotetrasiloxane Ingestion: Rodents given large doses via oral gavage of octamethylcyclotetrasiloxane (1600 mg/kg day, 14 days) developed liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appeared 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, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial 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, gestation and lactation) with octamethylcyclotetrasiloxane (D4). Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in 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 days prior to mating through mating, gestation and lactation) resulted in a statistically significant decrease in live mean litter size as well as extended period of off-spring delivery (dystocia). These results were not observed at the 70 and 300 ppm dosing levels. Preliminary results from an ongoing 24-month combined chronic/oncogenicity study in rats exposed to 10, 30, 150 or 700 ppm D4 showed test-article related effects in the kidney (male and

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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 these effects were limited to the 700 ppm exposure group. The relevance of this data to humans is unclear. Further studies are ongoing. In developmental toxicity studies, rats and rabbits were exposed to octamethylcyclotetrasiloxane at concentrations up to 700 ppm and 500 ppm, respectively. No teratogenic effects (birth defects) were observed in either study.

12. ECOLOGICAL INFORMATION**ECOTOXICITY**

No data 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**

Australia Inventory of Chemical Substances (AICS)	y (positive listing)
EU list of existing chemical substances	y (positive listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	y (positive listing)
China Inventory of Existing Chemical Substances	y (positive listing)

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Korea Existing Chemicals Inventory (KECI) y (positive listing)
Canada DSL Inventory y (positive listing)
Canada NDSL Inventory n (Negative listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS) y (positive 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**

Reportable quantity: 11510 lbs

PRODUCT COMPOSITION

Toluene

Chemical

108-88-3

CERCLA Reportable Quantity

Reportable quantity: 1,000 LBS

SARA (311,312) HAZARD CLASS

Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

108-88-3, Toluene.

CALIFORNIA PROPOSITION 65

Warning! This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian Regulatory Information**WHMIS HAZARD CLASS**

D2A - Very 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).

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