

RTV 116

SAFETY DATA SHEET

1. Identification of the hazardous chemical and of the supplier

Product identifier: RTV 116

Recommended use of the chemical and restrictions on use

Recommended use: Not available.

Recommended restrictions: For industrial use only.

Details of principal suppliers

Manufacturer/Importer/Distributor Information : Momentive Performance Materials (Thailand) Limited
1/2 Moo 4, Asia Industrial Estate, Rayong, 21130
Thailand

Contact person : commercial.services@momentive.com

Telephone : +66-3899 7899

Telefax : +66-3899 7888

Emergency telephone number : 001 800 120 666 751 / +65 3158 1074

Responsible Department : Product Stewardship & Compliance

2. Hazard(s) identification

GHS classification of substance or mixture, and national or regional information :
Not classified

GHS label elements

Hazard symbol(s): No symbol

Signal Word: No signal word.

Hazard Statement(s): Not applicable

Precautionary statement(s): Not applicable

Other hazards which do not result in GHS classification: None known.

3. Composition and information of the ingredients of the hazardous chemical

Chemical nature: Mixture of polydimethylsiloxanes, fillers and cross-linkers.

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Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Silica	7631-86-9	10 - <30%
Red iron oxide	1309-37-1	3 - <5%
Octamethylcyclotetrasiloxane	556-67-2	<1%
Acetic acid	64-19-7	<1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

(1) The respirable particle(s) listed above are inextricably bound within the polymer matrix, and therefore does not present an inhalation hazard during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

4. First-aid measures

General information: Get medical attention if symptoms occur.

Description of necessary first-aid measures

Inhalation: Move to fresh air. Get medical attention if any discomfort continues.

Skin Contact: After contact with skin, remove product mechanically. Wash area with soap and water.

Eye contact: Rinse the eye with water immediately. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth. Do not induce vomiting. Consult a physician for specific advice.

Most important symptoms/effects, acute and delayed

Symptoms: Treatment is symptomatic and supportive.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Use standard firefighting procedures and consider the hazards of other involved materials. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

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Specific hazards arising from the chemical: In case of fire, carbon monoxide and carbon dioxide may be formed. Use water spray to keep fire-exposed containers cool.

Special protective action for fire fighters

Special fire-fighting procedures: Keep away from sources of ignition - No smoking. Static discharge: material can accumulate static charges which may cause an incendiary electrical discharge.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Wash skin thoroughly with soap and water. Keep container tightly closed and in a well-ventilated place. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with skin and eyes.

Environmental Precautions: No data available.

Methods and material for containment and cleaning up: 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.

Notification Procedures: Prevent runoff from entering drains, sewers, or streams. Caution: Contaminated surfaces may be slippery.

7. Handling and storage

Precautions to ensure safe handling: Acetic acid is formed during processing. Wear appropriate personal protective equipment. Product may charge electrostatically during pouring or filling. Use only in well-ventilated areas. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Keep containers tightly closed.

Conditions for safe storage, including any incompatibilities: Keep away from food, drink and animal feeding stuffs. Keep container tightly closed and in a well-ventilated place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Silicalnhalable particulate.	Time Weighted Average (TWA):	10 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations), as amended 03 2000
SilicaRespirable particles.	Time Weighted Average	3 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to

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	(TWA):		Health) Regulations), as amended03 2000
Red iron oxideDust and fume.	Time Weighted Average (TWA):	2 ppm 5 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations), as amended03 2000
Acetic acid	Time Weighted Average (TWA):	10 ppm 25 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations), as amended03 2000
Silica - Respirable particles.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Silica - Inhalable particles.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values, as amended (01 2021)
Red iron oxide - Respirable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2015)
Acetic acid	TWA	10 ppm	US. ACGIH Threshold Limit Values, as amended (03 2015)
	STEL	15 ppm	US. ACGIH Threshold Limit Values, as amended (03 2015)

This product contains one or more substances with an occupational exposure limit. However, the respirable particle(s) of this/these substance(s) are inextricably bound within the polymer matrix. Therefore, we do not expect an exposure to this/these substance(s) during normal use of this product. Tooling or machining of the cured product (sanding, cutting, milling) may release hazardous, respirable substances.

Biological Limit Values

None of the components have assigned exposure limits.

Appropriate Engineering Controls:

Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information:

Eyewash bottle with clean water. Use only in well-ventilated areas. When using do not eat, drink or smoke. Wash hands after handling.

Eye/face protection:

Safety glasses with side shields

Skin Protection

Hand Protection:

Chemical resistant gloves

Other:

Wear suitable protective clothing and eye/face protection.

Respiratory Protection:

Respirator with a vapour filter (EN 141) If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

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Hygiene measures: Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation, especially in confined areas. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	Paste
Color:	Red
Odor:	Acetic acid.
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash Point:	> 94 °C (Closed Cup) Product does not flash below 93.3C (200F) during test; no actual flash point >93.3 C was determined.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	ca. 1.09 g/cm3
Relative density:	ca. 1.09
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.
SADT:	No data available.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.

10. Stability and reactivity

Reactivity: Reacts with water.

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Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid:	Reacts with water liberating small amounts of acetic acid.
Incompatible Materials:	Strong Acids, Strong Bases
Hazardous Decomposition Products:	Carbon oxides Oxides of silicon. Acetic acid. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Symptoms

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	No data available.
Specified substance(s):	
Silica	LD 50 (Rat): > 15,000 mg/kg
Octamethylcyclotetrasiloxane	LD 50 (Rat): > 4,800 mg/kg
Acetic acid	LD 50 (Rat): 3,310 mg/kg

Dermal

Product:	No data available.
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Specified substance(s):
Octamethylcyclotetrasiloxane LD 50 (Rat): > 2,375 mg/kg

Inhalation
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane LC50 (Rat, 4 h): 36 mg/l

Acetic acid TDLo (Rat, 4 h): 16 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):
Silica (Rabbit): No skin irritation

Octamethylcyclotetrasiloxane OECD Test Guideline 404 (Rabbit): Non irritating

Serious Eye Damage/Eye Irritation
Product: OECD-Guideline 405 (Acute Eye Irritation/Corrosion) (Rabbit): Non irritating
The health hazard evaluation is based on the toxicological properties of a similar material.

Respiratory or Skin Sensitization
Product: No data available.

ACGIH Sensitization

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

Specified substance(s):
Octamethylcyclotetrasiloxane Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic)
Mouse Lymphoma Assay (OECD Guideline 476): negative (not mutagenic)

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In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane Chromosomal aberration (OECD 475) Inhalation (Rat, male and female): negative
Dominant lethal assay (OECD 478) Oral (Rat, male and female): negative

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects:

Octamethylcyclotetrasiloxane (D4) Ingestion: Rodents given large doses via oral gavage of Octamethylcyclotetrasiloxane (1600mg/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, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. This response in rats, which does not affect the animal's health, is well-documented and widely recognized. It is related to an increase of liver enzymes that metabolize and eliminate a material from the body. The increased liver weight reverses even while the D4 exposure continues. The finding is not adverse, but is considered a natural adaptive change in rats, and does not represent a hazard to humans. 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 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. A two-year, combined chronic/carcinogenicity study, during which rats were exposed to D4 by inhalation, data showed a statistically significant increase in a benign uterine tumor in female rats exposed at the highest level--a level much higher than the low levels that consumers or workers may encounter. An expert panel of independent scientists who have reviewed the results of this research concur that the finding seen in the two-year study occurred through a biological pathway that is specific to the rat and is not relevant to humans. Therefore, this observed effect does not indicate a potential health hazard to humans. In developmental toxicity studies, rats and rabbits were exposed to D4 at concentrations up to

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700 ppm and 500 ppm, respectively. No teratogenic effects (birth defects) were observed in either study.

12. Ecological information

Ecotoxicity

Acute hazards to the aquatic environment

Fish

Product: No data available.

Specified substance(s):

Silica	LC0 (Brachydanio rerio, 96 h): 5,000 mg/l
Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility LC50 (Oncorhynchus mykiss, 96 h): > 0.022 mg/l
Acetic acid	LC50 (Lepomis macrochirus, 96 h): 75 mg/l LC0 (Leuciscus idus): 368 mg/l LC100 (Leuciscus idus): 452 mg/l LC50 (Leuciscus idus, 48 h): 410 mg/l LC50 (Pimephales promelas, 96 h): 88 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility EC50 (Daphnia magna, 48 h): > 0.015 mg/l
Acetic acid	LC0 (Daphnia magna): 150 mg/l EC50 (Daphnia magna, 24 h): 95 mg/l

Chronic hazards to the aquatic environment

Fish

Product: No data available.

Specified substance(s):

Silica	LC0 (Brachydanio rerio, 4 d): 5,000 mg/l
Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility NOEC (Oncorhynchus mykiss, 93 d): >= 0.0044 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility NOEC (Daphnia magna, 21 d): > 0.015 mg/l
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Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane	No toxicity at the limit of solubility ErC50 (Selenastrum capricornutum, 96 h): > 0.022 mg/l
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Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane 3.7 % (29 d, 310 Ready Biodegradability - CO₂ in Sealed Vessels (Headspace Test)) Not readily biodegradable.

Acetic acid 60 % (5 d, No data available.)

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane Bioconcentration Factor (BCF): 12,400

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: No data available.

Mobility

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Silica No data available.

Red iron oxide No data available.

Octamethylcyclotetrasiloxane No data available.

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Acetic acid No data available.

Other adverse effects: No data available.

13. Disposal information

General information: Do not discharge into drains, water courses or onto the ground. See Section 8 for information on appropriate personal protective equipment.

Disposal methods

Disposal instructions: Can be incinerated when in compliance with local regulations. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. The generation of waste should be avoided or minimized wherever possible. The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

Contaminated Packaging: Dispose of as unused product.

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14. Transport information

ADR

Not Regulated.

IATA

Not Regulated.

IMDG

Not Regulated.

Special precautions for user: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods. Protect from moisture. Keep away from food, foodstuff, acids and bases. keep away from odour sensitive materials

Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

15. Regulatory information

Malaysia. Medical Surveillance Chemicals, Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health): Schedule 2

Silica

Malaysia. Prohibited Use of Substances [Occupational Safety and Health (Prohibition of Use of Substance) Order]

Not Regulated

Malaysia. Controlled Precursors Subject to Conditional Exports (Customs (Prohibition of Exports) Order 2017, Second Schedule, as amended)

Acetic Anhydride

Malaysia. Controlled Precursors Subject to Conditional Imports (Customs (Prohibition of Imports) Order, Part I of Second Schedule)

Acetic Anhydride

Malaysia. CWC. Chemical Weapons Convention Act 2005, (Schedules 1-3)

Not Regulated

Malaysia. Ozone Depleting Substances (ODS) (Environmental Quality (Prohibition on the Use of CFC and Other Gases as Propellants and Blowing Agents) Order 1993)

Not Regulated

Malaysia. Lists of Halon Management (Environmental Quality (Halon Management) Regulation 1999)

Not Regulated

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Malaysia. Refrigerant Hazardous Substance (Environmental Quality (Refrigerant Management) Regulation), as amended

Not Regulated

Malaysia. Active Ingredients of Pesticide Product (Pesticide Act 1974, First Schedule), as amended

Not Regulated

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

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Inventory Status:

Australia Industrial Chem. Act (AICC):	On or in compliance with the inventory	Remarks: None.
Canada DSL Inventory List:	Q (quantity restricted)	Remarks: Please contact your supplier for further information on the inventory status of this material.
Canada NDSL Inventory:	Not in compliance with the inventory.	Remarks: None.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory	Remarks: None.
Japan (ENCS) List:	On or in compliance with the inventory	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory	Remarks: None.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory	Remarks: None.
Philippines PICCS:	On or in compliance with the inventory	Remarks: None.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory	Remarks: None.
US TSCA Inventory:	On or in compliance with the inventory	Remarks: Commercial Status: Active
REACH:	If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants.	Remarks: None.

16. Other information, including date of preparation or last revision

Issue Date:	2024/03/15
Revision Date:	No data available.No data available.
Version #:	2.0
Source of information:	No data available.
Further Information:	No data available.

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Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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