SAFETY DATA SHEET

RTV SILICONE GASKET, Sensor-safe, Black, 226 g

Version	Revision Date:	SDS Number:	Date of last issue: 10/21/2021
5.1	05/23/2022	10702209-00006	Date of first issue: 11/16/2016

SECTION 1. IDENTIFICATION

Product name : RTV SILICONE GASKET, Sensor-safe, Black, 226 g

Product code : 890.913

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited

Address : 345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Emergency telephone : Emergencies involving a spill, fire, explosion or exposure:
CHEMTREC (24/7): 1-800-424-9300
Transport related emergencies:
CANUTEC (24/7): 1-613-996-6666 or * 666 (cell)

Urgences impliquant un déversement, incendie, explosion ou exposition:
CHEMTREC (24/7): 1-800-424-9300
Urgences liées au transport:
CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire)

E-mail address : prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use : Sealant

Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Gases under pressure : Liquefied gas

Skin sensitization : Category 1

Carcinogenicity : Category 1B

Reproductive toxicity : Category 2

Specific target organ toxicity - repeated exposure	:	Category 2 (Blood)
Simple Asphyxiant	:	Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H280 Contains gas under pressure; may explode if heated.
H317 May cause an allergic skin reaction.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H373 May cause damage to organs (Blood) through prolonged or repeated exposure.
May displace oxygen and cause rapid suffocation.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P308 + P313 IF exposed or concerned: Get medical attention.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Butan-2-one O,O',O''-(methylsilylidyne)trioxime	N-[bis[(butan-2-ylidene-amino)oxy]-methylsi-lyl]oxybutan-2-imine	22984-54-9	>= 1 - < 5 *
1,1-Difluoroethane	Hydrofluorocar-bon 152A	75-37-6	>= 1 - < 5 *
Titanium dioxide	Titanic anhy-dride	13463-67-7	>= 0.1 - < 1 *
Butan-2-one O,O',O''-(vinylsilylidyne)trioxime	N-[Bis[[(E)-butan-2-ylidene-amino]oxy]-ethenylsi-lyl]oxybutan-2-imine	2224-33-1	>= 0.1 - < 1 *
Methyl-tri(ethylmethylketoxime)silane isomers and oligomers	No data availa-ble	Not Assigned	>= 0.1 - < 1 *
Dimethyl Cyclosilox-anes	Cyclosiloxanes, di-Me	69430-24-6	>= 0.1 - < 1 *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention immediately.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	May cause an allergic skin reaction. May cause cancer. Suspected of damaging fertility. May cause damage to organs through prolonged or repeated exposure. Gas reduces oxygen available for breathing.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Exposure to combustion products may be a hazard to health. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.
Hazardous combustion products	:	Carbon oxides Nitrogen oxides (NOx) Silicon oxides Fluorine compounds
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec-	:	Evacuate personnel to safe areas.

tive equipment and emergency procedures		Ventilate the area. Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	If sufficient ventilation is unavailable, use with local exhaust ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Do not breathe spray. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Keep container tightly closed. Keep away from water. Protect from moisture. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	:	Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations.

Do not pierce or burn, even after use.
Keep cool. Protect from sunlight.

Materials to avoid : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Titanium dioxide	13463-67-7	TWA	10 mg/m³	CA AB OEL
		TWA (Total dust)	10 mg/m³	CA BC OEL
		TWA (respirable dust fraction)	3 mg/m³	CA BC OEL
		TWAEV (total dust)	10 mg/m³	CA QC OEL
		TWA	10 mg/m³ (Titanium dioxide)	ACGIH

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethyl methyl ketoxime	96-29-7	TWA	10 ppm	US WEEL

Engineering measures : Processing may form hazardous compounds (see section 10).
Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type	:	Self-contained breathing apparatus
Hand protection		
Material	:	Chemical-resistant gloves
Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	:	Wear the following personal protective equipment: Safety glasses
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Propellant	:	1,1-Difluoroethane
Color	:	black
Odor	:	slight
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling	:	Not applicable

range

Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	Not applicable
Relative vapor density	:	Not applicable
Relative density	:	1.04
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Use at elevated temperatures may form highly hazardous compounds. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Can react with strong oxidizing agents.
Methyl Ethyl Ketoxime (MEKO) is formed upon contact with water or humid air.
Hazardous decomposition products will be formed upon contact with water or humid air.

Conditions to avoid : Exposure to moisture.

Incompatible materials : Oxidizing agents
Water

Hazardous decomposition products
Contact with water or humid air : Ethyl methyl ketoxime

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Acute oral toxicity : LD50 (Rat): 2,453 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402

1,1-Difluoroethane:

Acute inhalation toxicity : LC50 (Rat): > 437500 ppm
Exposure time: 4 h
Test atmosphere: gas

Titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 425
Acute dermal toxicity	:	LD50 (Rat): > 2,009 mg/kg Method: OECD Test Guideline 402

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Acute oral toxicity	:	Acute toxicity estimate: 100 mg/kg Method: Expert judgment Remarks: Based on data from similar materials
Acute dermal toxicity	:	Acute toxicity estimate: 1,100 mg/kg Method: Expert judgment Remarks: Based on data from similar materials

Dimethyl Cyclosiloxanes:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50: 36 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Titanium dioxide:

Species	:	Rabbit
Result	:	No skin irritation

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Dimethyl Cyclosiloxanes:

Species	:	Rabbit
Result	:	No skin irritation
Remarks	:	Based on data from similar materials

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Method	:	OECD Test Guideline 405

Titanium dioxide:

Species	:	Rabbit
Result	:	No eye irritation

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Species	:	Rabbit
Result	:	Irreversible effects on the eye
Method	:	OECD Test Guideline 405

Dimethyl Cyclosiloxanes:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	positive
Assessment	:	Probability or evidence of skin sensitization in humans

Titanium dioxide:

Test Type	:	Local lymph node assay (LLNA)

Routes of exposure	:	Skin contact
Species	:	Mouse
Result	:	negative

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of skin sensitization in humans

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of skin sensitization in humans

Dimethyl Cyclosiloxanes:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative

1,1-Difluoroethane:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: inhalation (gas) Method: OECD Test Guideline 474 Result: negative

Titanium dioxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Method: OECD Test Guideline 482
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Dimethyl Cyclosiloxanes:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

May cause cancer.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Species	:	Rat
Application Route	:	inhalation (vapor)
Exposure time	:	26 Months
Result	:	positive
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Sufficient evidence of carcinogenicity in animal experiments

1,1-Difluoroethane:

Species	:	Rat
Application Route	:	inhalation (vapor)
Exposure time	:	104 weeks
Result	:	negative

Titanium dioxide:

Species	:	Rat
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	2 Years
Method	:	OECD Test Guideline 453
Result	:	positive
Remarks	:	The mechanism or mode of action may not be relevant in humans.
Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in inhalation studies with animals.

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Species	:	Rat
Application Route	:	inhalation (vapor)
Exposure time	:	26 Months
Result	:	positive
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Sufficient evidence of carcinogenicity in animal experiments

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Species	:	Rat
Application Route	:	inhalation (vapor)
Exposure time	:	26 Months
Result	:	positive
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Sufficient evidence of carcinogenicity in animal experiments

Reproductive toxicity

Suspected of damaging fertility.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

1,1-Difluoroethane:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (gas)
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat

Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Dimethyl Cyclosiloxanes:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Inhalation
Method: OPPTS 870.3800
Result: positive
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT-single exposure

Not classified based on available information.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Assessment : May cause drowsiness or dizziness.
Remarks : Based on data from similar materials

1,1-Difluoroethane:

Assessment : May cause drowsiness or dizziness.

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Assessment : May cause drowsiness or dizziness.
Remarks : Based on data from similar materials

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Assessment : May cause drowsiness or dizziness.
Remarks : Based on data from similar materials

STOT-repeated exposure

May cause damage to organs (Blood) through prolonged or repeated exposure.

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Routes of exposure : Ingestion
Target Organs : Blood

Assessment	:	Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.
Remarks	:	Based on data from similar materials

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Routes of exposure	:	Ingestion
Target Organs	:	Blood
Assessment	:	Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.
Remarks	:	Based on data from similar materials

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Routes of exposure	:	Ingestion
Target Organs	:	Blood
Assessment	:	Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.
Remarks	:	Based on data from similar materials

Repeated dose toxicity

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Species	:	Rat
LOAEL	:	> 1.7 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	26 Months
Remarks	:	Based on data from similar materials

Species	:	Rat, male
NOAEL	:	> 10 - 100 mg/kg
Application Route	:	Ingestion
Exposure time	:	13 Weeks
Remarks	:	Based on data from similar materials

1,1-Difluoroethane:

Species	:	Rat
NOAEL	:	100000 ppm
Application Route	:	inhalation (gas)
Exposure time	:	14 Days

Titanium dioxide:

Species	:	Rat
NOAEL	:	24,000 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days

Species	:	Rat
NOAEL	:	10 mg/m³
Application Route	:	inhalation (dust/mist/fume)

Exposure time : 2 y

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Species	:	Rat
LOAEL	:	> 1.7 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	26 Months
Remarks	:	Based on data from similar materials

Species	:	Rat, male
NOAEL	:	> 10 - 100 mg/kg
Application Route	:	Ingestion
Exposure time	:	13 Weeks
Remarks	:	Based on data from similar materials

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Species	:	Rat
LOAEL	:	> 1.7 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	26 Months
Remarks	:	Based on data from similar materials

Species	:	Rat, male
NOAEL	:	> 10 - 100 mg/kg
Application Route	:	Ingestion
Exposure time	:	13 Weeks
Remarks	:	Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Toxicity to fish	:	EC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 120 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 94 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 30 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Orange-red killifish)): > 1 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Titanium dioxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Scenedesmus capricornutum (fresh water algae)): > 10 - 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Scenedesmus capricornutum (fresh water algae)): > 1

mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Orange-red killifish)): > 1 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 100 mg/l
Exposure time: 17 h
Remarks: Based on data from similar materials

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Scenedesmus capricornutum (fresh water algae)): > 10 - 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Scenedesmus capricornutum (fresh water algae)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Orange-red killifish)): > 1 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 100 mg/l

Exposure time: 17 h
Remarks: Based on data from similar materials

Dimethyl Cyclosiloxanes:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.014 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials
No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.015 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials
No toxicity at the limit of solubility.

Persistence and degradability

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 28 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Biodegradability : Result: not rapidly degradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301A
Remarks: Based on data from similar materials

Dimethyl Cyclosiloxanes:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Butan-2-one O,O',O''-(methylsilylidyne)trioxime:

Partition coefficient: n-octanol/water : log Pow: 0.59 - 0.65

1,1-Difluoroethane:

Partition coefficient: n-octanol/water : log Pow: 0.75

Butan-2-one O,O',O''-(vinylsilylidyne)trioxime:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 0.5 - 2.5
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 0.59 - 0.65

Dimethyl Cyclosiloxanes:

Partition coefficient: n-octanol/water : log Pow: > 4

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.
Please ensure aerosol cans are sprayed completely empty (including propellant)

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.2
Packing group	:	Not assigned by regulation
Labels	:	2.2

IATA-DGR

UN/ID No.	:	UN 1950
Proper shipping name	:	Aerosols, non-flammable
Class	:	2.2
Packing group	:	Not assigned by regulation
Labels	:	Non-flammable, non-toxic Gas
Packing instruction (cargo aircraft)	:	203
Packing instruction (passenger aircraft)	:	203

IMDG-Code

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS

Class	:	2.2
Packing group	:	Not assigned by regulation
Labels	:	2.2
EmS Code	:	F-D, S-U
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

TDG

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.2
Packing group	:	Not assigned by regulation
Labels	:	2.2
ERG Code	:	126
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

Volatile organic compounds (VOC) content

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 - Guidelines for VOC in Consumer Products
VOC content: 3.96 % / 41.18 g/l

International Regulations

Montreal Protocol : 1,1-Difluoroethane

The ingredients of this product are reported in the following inventories:

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for air-

		borne contaminants
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	:	8-hour, time-weighted average
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA QC OEL / TWAEV	:	Time-weighted average exposure value
US WEEL / TWA	:	8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	05/23/2022
Date format	:	mm/dd/yyyy

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS mate-

rial is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CA / Z8