

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Krytox™ Catalyst

Version	Revision Date:	SDS Number:	Date of last issue: 06/06/2023
6.0	10/19/2023	5840885-00009	Date of first issue: 05/09/2020

### SECTION 1. IDENTIFICATION

Product name : Krytox™ Catalyst

SDS-Identcode : 130000050304

#### Manufacturer or supplier's details

Company name of supplier : The Chemours Company FC, LLC

Address : 1007 Market Street  
Wilmington, DE 19801 United States of America (USA)

Telephone : 1-844-773-CHEM (outside the U.S. 1-302-773-1000)

Emergency telephone : Medical emergency: 1-866-595-1473 (outside the U.S. 1-302-773-2000) ; Transport emergency: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

#### Recommended use of the chemical and restrictions on use

Recommended use : Catalyst

Restrictions on use : For industrial use only.  
Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Inhalation) : Category 4

Carcinogenicity (Inhalation) : Category 2

Reproductive toxicity : Category 1B

Specific target organ toxicity : Category 2 (Kidney)  
- single exposure (Inhalation)

Specific target organ toxicity : Category 2 (Kidney)  
- repeated exposure (Inhalation)

#### GHS label elements


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Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H332 Harmful if inhaled. H351 Suspected of causing cancer if inhaled. H360FD May damage fertility. May damage the unborn child. H371 May cause damage to organs (Kidney) if inhaled. H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if inhaled.
Precautionary Statements	:	<b>Prevention:</b> P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves, protective clothing, eye protection and face protection.  <b>Response:</b> P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell. P308 + P311 IF exposed or concerned: Call a doctor. P308 + P313 IF exposed or concerned: Get medical attention.  <b>Storage:</b> P405 Store locked up.  <b>Disposal:</b> 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	CAS-No.	Concentration (% w/w)
Bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	>= 50 - < 70
Hexafluoropropylene	116-15-4	>= 30 - < 50
Caesium fluoride	13400-13-0	>= 10 - < 20

Actual concentration is withheld as a trade secret

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### SECTION 4. FIRST AID MEASURES

- |   |   |
|---|---|
| General advice  | : In the case of accident or if you feel unwell, seek medical advice immediately.<br>When symptoms persist or in all cases of doubt seek medical advice.  |
| If inhaled  | : If inhaled, remove to fresh air.<br>If not breathing, give artificial respiration.<br>If breathing is difficult, give oxygen.<br>Get medical attention.   |
| In case of skin contact                                     | : In case of contact, immediately flush skin with soap and plenty of water.<br>Remove contaminated clothing and shoes.<br>Get medical attention.<br>Wash clothing before reuse.<br>Thoroughly clean shoes before reuse.                           |
| In case of eye contact                                      | : Flush eyes with water as a precaution.<br>Get medical attention if irritation develops and persists.  |
| If swallowed  | : If swallowed, DO NOT induce vomiting.<br>Get medical attention.<br>Rinse mouth thoroughly with water.   |
| Most important symptoms and effects, both acute and delayed | : Harmful if inhaled.<br>Suspected of causing cancer if inhaled.<br>May damage fertility. May damage the unborn child.<br>May cause damage to organs if inhaled.<br>May cause damage to organs through prolonged or repeated exposure if inhaled. |
| 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<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical |
| Unsuitable extinguishing media        | : None known.  |
| Specific hazards during fire fighting | : Exposure to combustion products may be a hazard to health.                                 |

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- Hazardous combustion products : Carbon oxides  
Hydrogen fluoride  
carbonyl fluoride  
potentially toxic fluorinated compounds  
aerosolized particulates  
Metal 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, protective equipment and emergency procedures : 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

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ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Do not breathe mist or vapors.  
Do not swallow.  
Avoid contact with eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the environment.

Do not breathe decomposition products.

Conditions for safe storage : Keep in properly labeled containers.  
Store locked up.  
Keep tightly closed.  
Keep in a cool, well-ventilated place.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents  
Self-reactive substances and mixtures  
Organic peroxides  
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
Hexafluoropropylene	116-15-4	TWA	0.1 ppm	ACGIH
Caesium fluoride	13400-13-0	TWA	2.5 mg/m <sup>3</sup> (Fluorine)	OSHA Z-1
		TWA	2.5 mg/m <sup>3</sup> (Fluorine)	ACGIH

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrogen fluoride	7664-39-3	TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
		C	6 ppm	NIOSH REL

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			5 mg/m <sup>3</sup>	
		TWA	3 ppm 2.5 mg/m <sup>3</sup>	NIOSH REL
		TWA	3 ppm	OSHA Z-2
Carbonyl difluoride	353-50-4	TWA	2 ppm	ACGIH
		STEL	5 ppm	ACGIH
		TWA	2 ppm 5 mg/m <sup>3</sup>	NIOSH REL
		ST	5 ppm 15 mg/m <sup>3</sup>	NIOSH REL
Carbon dioxide	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m <sup>3</sup>	NIOSH REL
		ST	30,000 ppm 54,000 mg/m <sup>3</sup>	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m <sup>3</sup>	OSHA Z-1
Carbon monoxide	630-08-0	TWA	25 ppm	ACGIH
		TWA	35 ppm 40 mg/m <sup>3</sup>	NIOSH REL
		C	200 ppm 229 mg/m <sup>3</sup>	NIOSH REL
		TWA	50 ppm 55 mg/m <sup>3</sup>	OSHA Z-1

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Caesium fluoride	13400-13-0	Fluoride (Fluorine)	Urine	Prior to shift (16 hours after exposure ceases)	2 mg/l	ACGIH BEI
		Fluoride (Fluorine)	Urine	End of shift (As soon as possible after exposure ceases)	3 mg/l	ACGIH BEI

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

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### Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

### 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.  
Wash contaminated clothing before re-use.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : No data available

Odor : No data available

Odor Threshold : No data available

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pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative 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	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

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## SECTION 10. STABILITY AND REACTIVITY



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Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents

### Hazardous decomposition products

Thermal decomposition	:	Hydrogen fluoride Carbonyl difluoride Carbon dioxide Carbon monoxide
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## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

### Acute toxicity

|| Harmful if inhaled.

#### Product:

Acute oral toxicity	:	Acute toxicity estimate: 2,634 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 8161 ppm Exposure time: 4 h Test atmosphere: gas Method: Calculation method

#### Components:

##### **Bis(2-(2-methoxyethoxy)ethyl) ether:**

Acute oral toxicity	:	LD50 (Rat): 3,850 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 11 mg/l Exposure time: 7 h Test atmosphere: vapor Method: OECD Test Guideline 403 Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg Remarks: Based on data from similar materials

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### Hexafluoropropylene:

Acute oral toxicity	: Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	: LC50 (Rat): 3060 ppm Exposure time: 4 h Test atmosphere: gas Method: OECD Test Guideline 403
Acute dermal toxicity	: Assessment: The substance or mixture has no acute dermal toxicity

### Caesium fluoride:

Acute oral toxicity	: LD50 (Rat, female): 500 mg/kg Method: OECD Test Guideline 423
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:

#### Bis(2-(2-methoxyethoxy)ethyl) ether:

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

### Hexafluoropropylene:

Result	: No skin irritation
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### Caesium fluoride:

Species	: reconstructed human epidermis (RhE)
Method	: OECD Test Guideline 439
Result	: No skin irritation

### Serious eye damage/eye irritation

Not classified based on available information.

### Components:

#### Bis(2-(2-methoxyethoxy)ethyl) ether:

Species	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405

### Hexafluoropropylene:

Result	: No eye irritation
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### Respiratory or skin sensitization

#### Skin sensitization

|| Not classified based on available information.

#### Respiratory sensitization

|| Not classified based on available information.

#### Components:

##### Bis(2-(2-methoxyethoxy)ethyl) ether:

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

##### Hexafluoropropylene:

Routes of exposure	: Skin contact
Result	: negative

Routes of exposure	: Inhalation
Result	: negative

##### Caesium fluoride:

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

### Germ cell mutagenicity

|| Not classified based on available information.

#### Components:

##### Bis(2-(2-methoxyethoxy)ethyl) ether:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative  Test Type: In vitro mammalian cell gene mutation test Result: negative  Test Type: In vitro sister chromatid exchange assay in mam- malian cells Result: positive
Genotoxicity in vivo	: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

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Species: Rat  
Application Route: inhalation (vapor)  
Result: negative  
Remarks: Based on data from similar materials

### Hexafluoropropylene:

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

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Test Type: in vitro micronucleus test  
Method: OECD Test Guideline 487  
Result: negative

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with  
mammalian liver cells in vivo  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 486  
Result: negative

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

Test Type: Rodent dominant lethal test (germ cell) (in vivo)  
Species: Rat  
Application Route: inhalation (gas)  
Method: OPPTS 870.5450  
Result: negative

Germ cell mutagenicity -  
Assessment : Weight of evidence does not support classification as a germ  
cell mutagen.

### Caesium fluoride:

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

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

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Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative  
Remarks: Based on data from similar materials

### Carcinogenicity

Suspected of causing cancer if inhaled.

#### Components:

##### Hexafluoropropylene:

Species : Rat  
Application Route : inhalation (gas)  
Exposure time : 104 weeks  
Method : OPPTS 870.4200  
Result : positive  
Remarks : Based on data from similar materials  
The mechanism or mode of action may not be relevant in humans.

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with animals.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

May damage fertility. May damage the unborn child.

#### Components:

##### Bis(2-(2-methoxyethoxy)ethyl) ether:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 421  
Result: positive

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: positive

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

### Hexafluoropropylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 443  
Result: negative

Effects on fetal development : Test Type: Prenatal development toxicity study (teratogenicity)  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 414  
Result: negative

Test Type: Prenatal development toxicity study (teratogenicity)  
Species: Rabbit  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 414  
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

### Caesium fluoride:

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

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

### STOT-single exposure

May cause damage to organs (Kidney) if inhaled.

### Components:

#### Hexafluoropropylene:

Routes of exposure : inhalation (gas)  
Target Organs : Kidney

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|| Assessment : Shown to produce significant health effects in animals at concentrations of >2500 to 20000 ppmV/4h.

### STOT-repeated exposure

|| May cause damage to organs (Kidney) through prolonged or repeated exposure if inhaled.

#### Components:

##### **Bis(2-(2-methoxyethoxy)ethyl) ether:**

|| Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

##### **Hexafluoropropylene:**

|| Routes of exposure : inhalation (gas)  
|| Target Organs : Kidney  
|| Assessment : Shown to produce significant health effects in animals at concentrations of >50 to 250 ppmV/6h/d.

### Repeated dose toxicity

#### Components:

##### **Bis(2-(2-methoxyethoxy)ethyl) ether:**

|| Species : Rat  
|| NOAEL : 250 mg/kg  
|| Application Route : Ingestion  
|| Exposure time : 28 Days  
|| Method : OECD Test Guideline 407  
|| Remarks : Based on data from similar materials

##### **Hexafluoropropylene:**

|| Species : Mouse, male and female  
|| NOAEL : 10 ppm  
|| LOAEL : 50 ppm  
|| Application Route : inhalation (gas)  
|| Exposure time : 90 Days  
|| Method : OPPTS 870.3465

### Aspiration toxicity

|| Not classified based on available information.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **Bis(2-(2-methoxyethoxy)ethyl) ether:**

|| Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

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	Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 7,467 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): 8,996 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
	EC10 (Pseudokirchneriella subcapitata (green algae)): 2,871 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials
Toxicity to microorganisms	: EC10: > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

### Hexafluoropropylene:

#### Ecotoxicology Assessment

Acute aquatic toxicity	: The physicochemical properties in conjunction with limited or no aqueous exposure indicate the potential for toxicity to aquatic organisms is low.
Chronic aquatic toxicity	: The physicochemical properties in conjunction with limited or no aqueous exposure indicate the potential for toxicity to aquatic organisms is low.

### Caesium fluoride:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 10 - 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)): 62 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (algae)): 36 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
	EC10 (Pseudokirchneriella subcapitata (algae)): 19 mg/l Exposure time: 72 h



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	Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	: NOEC (Danio rerio (zebra fish)): > 1 mg/l Exposure time: 35 d Method: OECD Test Guideline 210 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 (activated sludge): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

### Persistence and degradability

#### Components:

##### **Bis(2-(2-methoxyethoxy)ethyl) ether:**

Biodegradability	: Result: Inherently biodegradable. Method: OECD Test Guideline 302B Remarks: Based on data from similar materials
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### Bioaccumulative potential

#### Components:

##### **Bis(2-(2-methoxyethoxy)ethyl) ether:**

Partition coefficient: n-octanol/water	: log Pow: -0.84
--	------------------

##### **Hexafluoropropylene:**

Bioaccumulation	: Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	: log Pow: 1.95 pH: 7

### 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. Do not dispose of waste into sewer.
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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.

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

Not regulated as a dangerous good

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

#### Domestic regulation

##### 49 CFR

Not regulated as a dangerous good

##### Special precautions for user

Not applicable

### SECTION 15. REGULATORY INFORMATION

#### CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Carcinogenicity  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### US State Regulations

##### Pennsylvania Right To Know

Bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8
Hexafluoropropylene	116-15-4

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Caesium fluoride

13400-13-0

### California Prop. 65

WARNING: This product can expose you to chemicals including Lead, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### California List of Hazardous Substances

Hexafluoropropylene  
Caesium fluoride

116-15-4  
13400-13-0

### California Permissible Exposure Limits for Chemical Contaminants

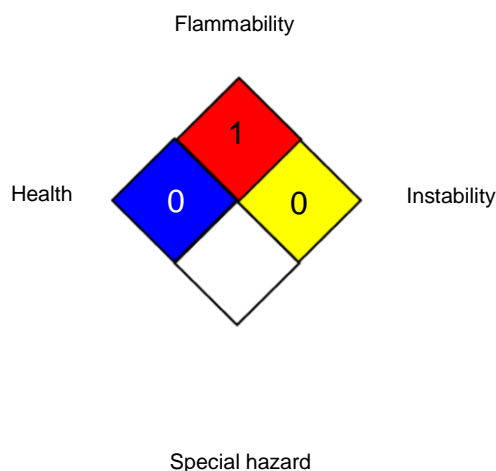
Hexafluoropropylene  
Caesium fluoride

116-15-4  
13400-13-0

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

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Before use read Chemours safety information.

For further information contact the local Chemours office or nominated distributors.

### Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2	: USA. Occupational Exposure Limits (OSHA) - Table Z-2
ACGIH / TWA	: 8-hour, time-weighted average

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ACGIH / STEL	:	Short-term exposure limit
ACGIH / C	:	Ceiling limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	:	Ceiling value not be exceeded at any time.
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-2 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - 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

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 : 10/19/2023

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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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 material 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.

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