

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## Capstone™ 1440

Version 11.0      Revision Date: 2025/06/11      SDS Number: 1340265-00046      Date of last issue: 2024/10/14  
Date of first issue: 2017/02/27

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Capstone™ 1440  
SDS-Identcode : 130000118756

#### Manufacturer or supplier's details

Company : The Chemours Chemical (Shanghai) Co., Ltd.  
Address : 9F, SCG Parkside, 868 Yinghua Road, Pudong New District  
201204, Shanghai, China  
Telephone : 86 400 8056 528  
Emergency telephone number : 86 532 8388 9090  
E-mail address : SDS.ChinaPSR@chemours.com  
Telefax : 86 21 2612 0862

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

Recommended use : Firefighting agent  
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.

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance : liquid  
Colour : clear, amber  
Odour : characteristic

Causes mild skin irritation. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

#### GHS Classification

Skin corrosion/irritation : Category 3  
Serious eye damage/eye irritation : Category 1

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Short-term (acute) aquatic hazard : Category 3

Long-term (chronic) aquatic hazard : Category 3

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H316 Causes mild skin irritation.  
H318 Causes serious eye damage.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
P280 Wear eye protection/ face protection.  
**Response:**  
P305 + P354 + P338 + P317 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.  
P332 + P317 If skin irritation occurs: Get medical help.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Physical and chemical hazards

Not classified based on available information.

### Health hazards

Causes mild skin irritation. Causes serious eye damage.

### Environmental hazards

Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

### Other hazards which do not result in classification

Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema).

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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### Components

Chemical name	CAS-No.	Concentration (% w/w)
2-(2-Butoxyethoxy)ethanol	112-34-5	>= 20 -< 30
Carboxymethyl-dimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide	34455-29-3	>= 10 -< 20
1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts	68139-30-0	>= 3 -< 10
Sodium octyl sulphate	142-31-4	>= 1 -< 3
D-Glucopyranose, Oligomeric, C8-10 Glycosides	68515-73-1	>= 1 -< 2.5
Ethanol	64-17-5	>= 1 -< 10
Sodium chloride	7647-14-5	>= 1 -< 10

### 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.  
Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with 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 : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Inhalation may provoke the following symptoms:  
respiratory tract irritation  
Lack of coordination  
Lung oedema  
Unconsciousness  
Dizziness  
Drowsiness  
Convulsions  
Skin contact may provoke the following symptoms:  
Irritation

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Discomfort  
Itching  
Redness  
Eye contact may provoke the following symptoms  
Lachrymation  
Ingestion may provoke the following symptoms:  
confusion  
tearing  
Redness  
Discomfort  
Causes mild skin irritation.  
Causes serious eye damage.

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.

### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Hydrogen fluoride  
carbonyl fluoride  
potentially toxic fluorinated compounds  
aerosolized particulates  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides  
Metal oxides  
Chlorine 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.



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Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

### 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 dyking or other appropriate containment to keep material from spreading. If dyked 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.

### 7. HANDLING AND STORAGE

#### Handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment



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Keep container tightly closed.  
Take care to prevent spills, waste and minimize release to the environment.

Do not breathe decomposition products.

Avoidance of contact : Oxidizing agents

### Storage

Conditions for safe storage : Keep in properly labelled containers.  
Keep tightly closed.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

Packaging material : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-(2-Butoxyethoxy)ethanol	112-34-5	TWA (Inhalable fraction and vapor)	10 ppm	ACGIH
Ethanol	64-17-5	STEL	1,000 ppm	ACGIH

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrofluoric acid	7664-39-3	MAC	2 mg/m <sup>3</sup> (Fluorine)	CN OEL
		TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
Carbonyl difluoride	353-50-4	PC-TWA	5 mg/m <sup>3</sup>	CN OEL
		PC-STEL	10 mg/m <sup>3</sup>	CN OEL
		TWA	2 ppm	ACGIH
		STEL	5 ppm	ACGIH
Carbon dioxide	124-38-9	PC-TWA	9,000 mg/m <sup>3</sup>	CN OEL
		PC-STEL	18,000 mg/m <sup>3</sup>	CN OEL

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		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
Carbon monoxide	630-08-0	PC-TWA	20 mg/m <sup>3</sup>	CN OEL
		PC-STEL	30 mg/m <sup>3</sup>	CN OEL
		MAC	20 mg/m <sup>3</sup>	CN OEL
		MAC	15 mg/m <sup>3</sup>	CN OEL
		TWA	25 ppm	ACGIH

**Engineering measures** : Processing may form hazardous compounds (see section 10).  
Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

### 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** : Combined particulates, acidic gas/vapour and organic vapour type

**Eye/face protection** : Wear the following personal protective equipment:  
Chemical resistant goggles must be worn.  
If splashes are likely to occur, wear:  
Face-shield

**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).

**Hand protection**  
**Material** : Viton®

**Remarks** : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. 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. Breakthrough time is not determined for the product. Change gloves often!

**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.



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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: clear, amber
Odour	: characteristic
Odour Threshold	: No data available
pH	: 7.5 - 9.5
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 95 °C
Flash point	: > 100 °C
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
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: 1.05 - 1.09
Solubility(ies) Water solubility	: completely soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available



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Decomposition temperature : > 200 °C

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle characteristics  
Particle size : Not applicable

### 10. STABILITY AND REACTIVITY

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 : Hydrofluoric acid  
Carbonyl difluoride  
Carbon dioxide  
Carbon monoxide

### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method



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Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method

### Components:

#### **2-(2-Butoxyethoxy)ethanol:**

Acute oral toxicity : LD50 (Mouse): 2,410 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 2,764 mg/kg

#### **Carboxymethyl-dimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### **1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Based on data from similar materials

#### **Sodium octyl sulphate:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### **D-Glucopyranose, Oligomeric, C8-10 Glycosides:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: The test was conducted equivalent or similar to guideline

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg



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Method: OECD Test Guideline 402

Remarks: The test was conducted equivalent or similar to guideline

### Ethanol:

Acute oral toxicity : LD50 (Rat): 10,470 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male): 116.9 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 15,800 mg/kg

### Sodium chloride:

Acute oral toxicity : LD50 (Rat): 3,550 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 42 mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

### Skin corrosion/irritation

Causes mild skin irritation.

### Components:

#### 2-(2-Butoxyethoxy)ethanol:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Mild skin irritation

#### Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

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

#### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

Species : reconstructed human epidermis (RhE)  
Method : OECD Test Guideline 431

Species : reconstructed human epidermis (RhE)  
Method : OECD Test Guideline 439

Result : No skin irritation

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### Sodium octyl sulphate:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation  
Remarks : The test was conducted according to guideline

### Ethanol:

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

### Sodium chloride:

Species : Rabbit  
Result : No skin irritation

### Serious eye damage/eye irritation

Causes serious eye damage.

### Components:

#### 2-(2-Butoxyethoxy)ethanol:

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days

#### Carboxymethyl-dimethyl-3-[[[3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

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

#### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

Species : Rabbit  
Result : Irreversible effects on the eye  
Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

### Sodium octyl sulphate:

Species : Rabbit  
Result : Irreversible effects on the eye



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Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

Species : Rabbit  
Result : Irreversible effects on the eye  
Method : OECD Test Guideline 405  
Remarks : The test was conducted equivalent or similar to guideline

### Ethanol:

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

### Sodium chloride:

Species : Rabbit  
Result : No eye irritation

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

### Components:

#### 2-(2-Butoxyethoxy)ethanol:

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : negative

#### Carboxymethyl-dimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

#### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

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Remarks : Based on data from similar materials

### Sodium octyl sulphate:

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Result : negative

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : negative  
Remarks : The test was conducted equivalent or similar to guideline

### Ethanol:

Test Type : Mouse ear swelling test (MEST)  
Exposure routes : Skin contact  
Species : Mouse  
Result : negative

### Sodium chloride:

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Result : negative

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### 2-(2-Butoxyethoxy)ethanol:

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: Chromosome aberration test in vitro  
Result: negative  
  
Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Mouse  
Application Route: Ingestion

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Result: negative

### Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

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

### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

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  
Remarks: Based on data from similar materials

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

### Sodium octyl sulphate:

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

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)  
Species: Mouse  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: The test was conducted according to guideline

Test Type: In vitro mammalian cell gene mutation test



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Method: OECD Test Guideline 476

Result: negative

Remarks: The test was conducted equivalent or similar to guideline

### Ethanol:

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: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo

: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Result: negative

### Sodium chloride:

Genotoxicity in vitro

: Test Type: In vitro mammalian cell gene mutation test  
Result: positive

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

Test Type: Saccharomyces cerevisiae, gene mutation assay (in vitro)  
Result: positive

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Result: positive

Test Type: Chromosome aberration test in vitro  
Result: positive

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo

: Test Type: In vivo micronucleus test  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

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Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Intraperitoneal injection  
Result: positive

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

### Carcinogenicity

Not classified based on available information.

### Components:

#### Sodium octyl sulphate:

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative  
Remarks : Based on data from similar materials

#### Sodium chloride:

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative

### Reproductive toxicity

Not classified based on available information.

### Components:

#### 2-(2-Butoxyethoxy)ethanol:

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 415  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

#### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test



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Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

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

### Sodium octyl sulphate:

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

### Ethanol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Mouse  
Application Route: Ingestion  
Result: negative

### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### Components:

#### Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

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

### Repeated dose toxicity

#### Components:

#### 2-(2-Butoxyethoxy)ethanol:

Species : Rat  
NOAEL : 250 mg/kg  
LOAEL : 1,000 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days



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Method : OECD Test Guideline 408

Species : Rat  
NOAEL :  $\geq 0.094$  mg/l  
Application Route : inhalation (vapour)  
Exposure time : 90 Days  
Method : OECD Test Guideline 413

Species : Rat  
NOAEL :  $\geq 2,000$  mg/kg  
Application Route : Skin contact  
Exposure time : 90 Days

### Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

Species : Rat  
NOAEL : 200 mg/kg  
LOAEL : 1,000 mg/kg  
Application Route : Ingestion  
Exposure time : 28 d

### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

Species : Rat  
NOAEL :  $> 100$  mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days  
Method : OECD Test Guideline 408  
Remarks : Based on data from similar materials

### Sodium octyl sulphate:

Species : Rat  
NOAEL : 488 mg/kg  
LOAEL : 1,016 mg/kg  
Application Route : Ingestion  
Exposure time : 13 Weeks  
Remarks : Based on data from similar materials

### Ethanol:

Species : Rat  
NOAEL : 1,730 mg/kg  
LOAEL : 3,200 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days

### Sodium chloride:

Species : Rat



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LOAEL : 2,533 mg/kg  
Application Route : Ingestion  
Exposure time : 2 yr

### Aspiration toxicity

Not classified based on available information.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### **2-(2-Butoxyethoxy)ethanol:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,300 mg/l  
Exposure time: 96 h

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

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): >= 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10: > 1,995 mg/l  
Exposure time: 30 min

#### **Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 144 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.26 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

#### **1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1 - 10 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)): 11 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: NOEC (Pseudokirchneriella subcapitata (green algae)): 0.045 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	: EC10 (Pimephales promelas (fathead minnow)): > 0.01 - 0.1 mg/l Exposure time: 32 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	: NOEC (activated sludge): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

### Sodium octyl sulphate:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 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 Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Desmodesmus subspicatus (green algae)): > 511 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Remarks: Based on data from similar materials
	EC10 (Desmodesmus subspicatus (green algae)): 199 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Remarks: Based on data from similar materials
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): $\geq$ 1,357 mg/l Exposure time: 42 d Remarks: Based on data from similar materials



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.4 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50: 135 mg/l  
Exposure time: 3 h  
Remarks: Based on data from similar materials

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 100.81 mg/l  
Exposure time: 96 h  
Method: ISO 7346/2  
Remarks: The test was conducted according to guideline

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: The test was conducted according to guideline

Toxicity to algae/aquatic plants : EC10 (Desmodesmus subspicatus (green algae)): 6.25 mg/l  
Exposure time: 72 h  
  
ErC50 (Desmodesmus subspicatus (green algae)): 27.22 mg/l  
Exposure time: 72 h

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 560 mg/l  
Exposure time: 6 h

### Ethanol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 14,200 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 5,012 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l  
Exposure time: 72 h  
  
EC10 (Chlorella vulgaris (Fresh water algae)): 11.5 mg/l  
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Japanese medaka)): >= 79 mg/l  
Exposure time: 100 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 9.6 mg/l  
Exposure time: 9 d

Toxicity to microorganisms : EC50 (Protozoa): 5,800 mg/l

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Exposure time: 4 h

### Sodium chloride:

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 5,840 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4,136 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50: > 2,000 mg/l  
Exposure time: 96 h
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 252 mg/l  
Exposure time: 33 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia pulex (Water flea)): 314 mg/l  
Exposure time: 21 d
- Toxicity to microorganisms : EC10: > 1,000 mg/l

### Persistence and degradability

#### Components:

##### 2-(2-Butoxyethoxy)ethanol:

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 85 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

##### Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

- Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301

##### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 65 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

##### Sodium octyl sulphate:

- Biodegradability : Result: Readily biodegradable.  
Biodegradation: 93.5 %  
Exposure time: 29 d  
Method: OECD Test Guideline 301B

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||

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

|| Biodegradability : Result: Readily biodegradable.  
Biodegradation: 100 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301E  
Remarks: The test was conducted according to guideline

### Ethanol:

|| Biodegradability : Result: Readily biodegradable.  
Biodegradation: 84 %  
Exposure time: 20 d

### Bioaccumulative potential

### Components:

#### 2-(2-Butoxyethoxy)ethanol:

|| Partition coefficient: n-octanol/water : log Pow: 1

#### Carboxymethyldimethyl-3-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulphonyl]amino]propylammonium hydroxide:

|| Partition coefficient: n-octanol/water : log Pow: 1

#### 1-Propanaminium, N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-coco acyl derivs., hydroxides, inner salts:

|| Partition coefficient: n-octanol/water : log Pow: < 4

### D-Glucopyranose, Oligomeric, C8-10 Glycosides:

|| Partition coefficient: n-octanol/water : log Pow: < 4  
Remarks: Expert judgement

### Ethanol:

|| Partition coefficient: n-octanol/water : log Pow: -0.35

### Mobility in soil

No data available

### Other adverse effects

No data available



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### 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

- Waste from residues : Do not dispose of waste into sewer.  
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.

### 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

- UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Environmentally hazardous : no

##### IATA-DGR

- UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Packing instruction (cargo aircraft) : Not applicable  
Packing instruction (passenger aircraft) : Not applicable

##### IMDG-Code

- UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
EmS Code : Not applicable  
Marine pollutant : no

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

Not applicable for product as supplied.

#### National Regulations



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### GB 6944/12268

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Marine pollutant : no

### Special precautions for user

Not applicable

## 15. REGULATORY INFORMATION

### National regulatory information

#### Law on the Prevention and Control of Occupational Diseases

#### Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of determination.

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218) : Not listed

Hazardous Chemicals for Priority Management under SAWS : Not listed

Catalogue of Specially Controlled Hazardous Chemicals : Listed

List of Explosive Precursors : Not listed

### Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals : Not listed

### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export : Not listed

### Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals : Not listed

### Yangtze River Protection Law



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This product does not contain any dangerous chemicals prohibited for inland river transport.

### Regulations of Ozone Depleting Substances Management

List of Controlled Ozone Depleting Substances Import and Export : Not listed

List of Controlled Ozone Depleting Substances : Not listed

### Environmental Protection Law

List of Priority Controlled Chemicals : Not listed

List of Key Controlled New Pollutants : Not listed

## 16. OTHER INFORMATION

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Other information : Capstone™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC. Chemours™ and the Chemours Logo are trademarks of The Chemours Company. Before use read Chemours safety information. For further information contact the local Chemours office or nominated distributors.

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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

Date format : yyyy/mm/dd

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
CN OEL : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit  
ACGIH / C : Ceiling limit  
CN OEL / PC-TWA : Permissible concentration - time weighted average  
CN OEL / PC-STEL : Permissible concentration - short term exposure limit  
CN OEL / MAC : Maximum allowable concentration

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 -



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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

### Disclaimer

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.

CN / EN

