

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

### SECTION 1. IDENTIFICATION

Product name : Capstone™ FS-65 Fluorosurfactant

Product code : D14406145

SDS-Identcode : 130000052194

#### 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 : Surfactant

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 2

Skin sensitization : Category 1

Specific target organ toxicity : Category 1 (Lungs, larynx)  
- single exposure (Inhalation)

#### GHS label elements

Hazard pictograms :



# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H370 Causes damage to organs (Lungs, larynx) if inhaled.

Precautionary Statements : **Prevention:**  
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.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves.  
P284 Wear respiratory protection.

**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER.  
P307 + P311 IF exposed: Call a doctor.  
P333 + P313 If skin irritation or rash occurs: Get medical attention.  
P363 Wash contaminated clothing before reuse.

**Storage:**  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

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

### Other hazards

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

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts	1224429-82-6	$\geq 20 - < 30$
2-Methyl-2H-isothiazol-3-one	2682-20-4	$\geq 0.0015 - < 0.1$

Actual concentration is withheld as a trade secret

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

### 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 immediately.                                                                                                                                            |
| 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 if symptoms occur.<br>Rinse mouth thoroughly with water.                                                                                                                                                                                        |
| Most important symptoms and effects, both acute and delayed | : Inhalation may provoke the following symptoms:<br>Irritation<br>Shortness of breath<br>Symptoms may be delayed.<br>Eye contact may provoke the following symptoms<br>Discomfort<br>Lachrymation<br>Redness<br>May cause an allergic skin reaction.<br>Fatal if inhaled.<br>Causes damage to organs 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.                                                                                |

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Hydrogen fluoride  
carbonyl fluoride  
potentially toxic fluorinated compounds  
aerosolized particulates  
Carbon oxides
- 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 : Evacuate personnel to safe areas.  
Only trained personnel should re-enter the area.  
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.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

- 
- |                                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Local/Total ventilation                  | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Advice on safe handling                  | : | <p>Do not get on skin or clothing.<br/>Do not breathe mist or vapors.<br/>Do not swallow.<br/>Avoid contact with eyes.<br/>Wash skin thoroughly after handling.<br/>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br/>Keep container tightly closed.<br/>Do not eat, drink or smoke when using this product.<br/>Take care to prevent spills, waste and minimize release to the environment.</p> <p>Do not breathe decomposition products.</p> |
| Conditions for safe storage              | : | <p>Keep in properly labeled containers.<br/>Store locked up.<br/>Keep tightly closed.<br/>Keep in a cool, well-ventilated place.<br/>Store in accordance with the particular national regulations.</p>                                                                                                                                                                                                                                                                                                                            |
| Materials to avoid                       | : | <p>Do not store with the following product types:<br/>Self-reactive substances and mixtures<br/>Organic peroxides<br/>Flammable liquids<br/>Flammable solids<br/>Pyrophoric liquids<br/>Pyrophoric solids<br/>Self-heating substances and mixtures<br/>Substances and mixtures which in contact with water emit flammable gases<br/>Explosives<br/>Gases</p>                                                                                                                                                                      |
| Recommended storage temperature          | : | 41 - 104 °F / 5 - 40 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Further information on storage stability | : | <p>Do not freeze.</p> <p>Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.</p>                                                                                                                                                                                                                                                                                                                                                                                             |
- 

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version 10.2      Revision Date: 10/31/2023      SDS Number: 1337528-00048      Date of last issue: 04/06/2023  
Date of first issue: 02/27/2017

### 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 5 mg/m <sup>3</sup>	NIOSH REL
		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

**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** : 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 hazard.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

dous 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	:	butyl-rubber
Break through time	:	480 min
Glove thickness	:	0.89 mm

### Remarks

: Choose gloves to protect hands against chemicals depending on the concentration 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.

### 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	:	liquid
Color	:	colorless, yellow
Odor	:	odorless
Odor Threshold	:	No data available
pH	:	7.5 - 9
Melting point/freezing point	:	No data available

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

---

Initial boiling point and boiling range : 212 °F / 100 °C

Flash point : does not flash

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 : 1.1

Solubility(ies)  
Water solubility : soluble

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : > 392 °F / > 200 °C

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

---

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac- : Hazardous decomposition products will be formed at elevated



# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

tions temperatures.

Conditions to avoid : None known.

Incompatible materials : None.

### Hazardous decomposition products

Thermal decomposition : Hydrogen fluoride  
Carbonyl difluoride  
Carbon dioxide  
Carbon monoxide

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

### Acute toxicity

Fatal if inhaled.

### Product:

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

Acute inhalation toxicity : Acute toxicity estimate (Rat): 0.5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Expert judgment

### Components:

#### Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:

Acute oral toxicity : LD50 (Mouse): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Acute toxicity estimate (Rat): 0.12 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Expert judgment

#### 2-Methyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 (Rat): 120 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.11 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: Corrosive to the respiratory tract.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

---

Acute dermal toxicity : LD50 (Rat): 242 mg/kg  
Method: OECD Test Guideline 402

### Skin corrosion/irritation

Not classified based on available information.

#### Product:

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

#### Components:

##### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

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

##### **2-Methyl-2H-isothiazol-3-one:**

Result : Corrosive after 3 minutes to 1 hour of exposure

### Serious eye damage/eye irritation

Not classified based on available information.

#### Product:

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

#### Components:

##### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

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

##### **2-Methyl-2H-isothiazol-3-one:**

Result : Irreversible effects on the eye

### Respiratory or skin sensitization

#### **Skin sensitization**

May cause an allergic skin reaction.

#### **Respiratory sensitization**

Not classified based on available information.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

---

### **Components:**

#### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

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

#### **2-Methyl-2H-isothiazol-3-one:**

Routes of exposure	:	Skin contact
Result	:	positive

Assessment	:	Probability or evidence of high skin sensitization rate in humans
------------	---	-------------------------------------------------------------------

### **Germ cell mutagenicity**

Not classified based on available information.

### **Product:**

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

### **Components:**

#### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

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

#### **2-Methyl-2H-isothiazol-3-one:**

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Result: negative
-----------------------	---	--------------------------------------------------------------------

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

### **Carcinogenicity**

Not classified based on available information.

<b>IARC</b>	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.
-------------	----------------------------------------------------------------------------------------------------------------------------------------------------------

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

<b>NTP</b>	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.
------------	------------------------------------------------------------------------------------------------------------------------------------------

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

---

### Reproductive toxicity

Not classified based on available information.

#### Product:

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

#### Components:

##### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

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

##### **2-Methyl-2H-isothiazol-3-one:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 416  
Result: negative

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

### STOT-single exposure

Causes damage to organs (Lungs, larynx) if inhaled.

#### Product:

Routes of exposure : inhalation (dust/mist/fume)  
Target Organs : Lungs, larynx  
Assessment : Shown to produce significant health effects in animals at concentrations of 1.0 mg/l/4h or less.  
Remarks : Based on data from similar materials

#### Components:

##### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

Routes of exposure : inhalation (dust/mist/fume)  
Target Organs : Lungs, larynx  
Assessment : Shown to produce significant health effects in animals at concentrations of 1.0 mg/l/4h or less.  
Remarks : Based on data from similar materials

### STOT-repeated exposure

Not classified based on available information.

#### Product:

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

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

### Components:

#### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

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

### **Repeated dose toxicity**

#### Product:

Species : Mouse  
NOAEL : 300 mg/kg  
LOAEL : > 300 mg/kg  
Application Route : Ingestion  
Exposure time : 28 d  
Remarks : No significant adverse effects were reported

### **Aspiration toxicity**

Not classified based on available information.

## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 485 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 113 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)): 19.8 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

### Components:

#### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 117 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 22.6 mg/l

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

aquatic invertebrates	Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): 18.8 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  NOEC (Pseudokirchneriella subcapitata (green algae)): 3.9 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

### 2-Methyl-2H-isothiazol-3-one:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 4.77 - 6 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.93 - 1.9 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Skeletonema costatum (marine diatom)): 0.1 mg/l Exposure time: 72 h  ErC50 (Skeletonema costatum (marine diatom)): 0.0695 mg/l Exposure time: 24 h  EC10 (Pseudokirchneriella subcapitata (green algae)): 0.024 mg/l Exposure time: 24 h
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): 2.1 mg/l Exposure time: 33 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.04 mg/l Exposure time: 21 d

### Persistence and degradability

#### Product:

Biodegradability : Result: Not readily biodegradable.

#### Components:

#### **Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts:**

Biodegradability : Result: Not readily biodegradable.

#### **2-Methyl-2H-isothiazol-3-one:**

Biodegradability : Result: Not readily biodegradable.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

### Bioaccumulative potential

#### Components:

##### 2-Methyl-2H-isothiazol-3-one:

Partition coefficient: n- : log Pow: -0.34  
octanol/water

### 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.

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

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

---

### 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)  
Respiratory or skin sensitization  
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

Water	7732-18-5
Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts	1224429-82-6

#### California Prop. 65

WARNING: This product can expose you to chemicals including Pentadecafluorooctanoic acid, which is/are known to the State of California to cause cancer, and Carbon monoxide, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). Note to User: This product is not made with PFOA nor is PFOA intentionally present in the product; however, it is possible that PFOA may be present as an impurity at background (environmental) levels.

#### Additional regulatory information

Phosphoric Acid, mixed esters with partially fluorinated alcohol, ammonium salts	1224429-82-6
----------------------------------------------------------------------------------	--------------

This material contains one or more substances which are subject to a TSCA Section 5 Consent Order or Significant New Use Rule (SNUR).

This material contains one or more substances which requires export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D:  
P-09-0294

---

## SECTION 16. OTHER INFORMATION

### Further information



# SAFETY DATA SHEET

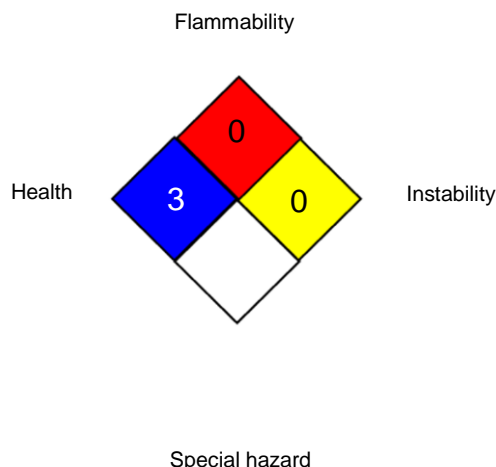
according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

### NFPA 704:



### HMIS® IV:

HEALTH	/	4
FLAMMABILITY		0
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 "0" represents the absence of a chronic hazard.

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.

### Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
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
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

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Capstone™ FS-65 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2023
10.2	10/31/2023	1337528-00048	Date of first issue: 02/27/2017

- 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 : 10/31/2023

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.

US / Z8