

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant



Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

SECTION 1. IDENTIFICATION

Product name : Capstone™ FS-61 Fluorosurfactant

Other means of identification : No data available

SDS-Identcode : 130000051565

Manufacturer or supplier's details

Company name of supplier : ChemPoint.com

Address : 411 108th Ave NE Suite 1050
Bellevue WA 98004

Telephone : 1-800-485-9569

Emergency telephone : 1-888-226-8832 (1-888-CAN-UTEC) (24 hours)

Recommended use of the chemical and restrictions on use

Recommended use : Surfactant

Restrictions on use : For industrial use only., Do not use this product in consumer spray applications except in water-based coatings where the maximum concentration of active ingredient does not exceed 0.1 wt percent.
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 Hazardous Products Regulations

Acute toxicity (Inhalation) : Category 1

Skin sensitization : Sub-category 1A

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

GHS label elements

Hazard pictograms :

Signal Word : Danger

Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
 Date of first issue: 02/27/2017

Hazard Statements : H317 May cause an allergic skin reaction.
 H330 Fatal if inhaled.
 H373 May cause damage to organs (Liver) through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
 P260 Do not breathe mist or vapors.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves.
 P284 Wear respiratory protection.

Response:
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER.
 P314 Get medical attention if you feel unwell.
 P333 + P313 If skin irritation or rash occurs: Get medical attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:
 P405 Store locked up.

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)
Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts	Assession Number: 18253-1	>= 10 - < 30 *
2-Methyl-2H-isothiazol-3-one	2682-20-4	>= 0.0015 - < 0.1 *

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

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

- When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention immediately.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Inhalation may provoke the following symptoms:
Irritation
Shortness of breath
Lung edema
Cough
Eye contact may provoke the following symptoms
Lachrymation
Redness
Discomfort
May cause an allergic skin reaction.
Fatal if inhaled.
May cause damage to organs through prolonged or repeated exposure.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.

SAFETY DATA SHEET



Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

- 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.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
-

SAFETY DATA SHEET



Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

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

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
Flammable liquids
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

Recommended storage temperature : 5 - 40 °C

Further information on storage stability : Perishable if frozen.

Do not freeze.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrofluoric acid	7664-39-3	TWA	0.5 ppm 0.4 mg/m ³ (Fluorine)	CA AB OEL
		(c)	2 ppm 1.6 mg/m ³ (Fluorine)	CA AB OEL

SAFETY DATA SHEET



Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
 Date of first issue: 02/27/2017

		C	2 ppm (Fluorine)	CA BC OEL
		C	3 ppm 2.6 mg/m ³ (Fluorine)	CA QC OEL
		TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
Carbonyl difluoride	353-50-4	TWA	2 ppm 5.4 mg/m ³	CA AB OEL
		STEL	5 ppm 13 mg/m ³	CA AB OEL
		TWA	2 ppm	CA BC OEL
		STEL	5 ppm	CA BC OEL
		STEV	5 ppm 13 mg/m ³	CA QC OEL
		TWAEV	2 ppm 5.4 mg/m ³	CA QC OEL
		TWA	2 ppm	ACGIH
		STEL	5 ppm	ACGIH
Carbon dioxide	124-38-9	STEL	30,000 ppm 54,000 mg/m ³	CA AB OEL
		TWA	5,000 ppm 9,000 mg/m ³	CA AB OEL
		TWA	5,000 ppm	CA BC OEL
		STEL	15,000 ppm	CA BC OEL
		TWAEV	5,000 ppm 9,000 mg/m ³	CA QC OEL
		STEV	30,000 ppm 54,000 mg/m ³	CA QC OEL
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
Carbon monoxide	630-08-0	TWA	25 ppm 29 mg/m ³	CA AB OEL
		TWA	25 ppm	CA BC OEL
		STEL	100 ppm	CA BC OEL
		TWAEV	35 ppm 40 mg/m ³	CA QC OEL
		STEV	200 ppm 230 mg/m ³	CA QC OEL
		TWA	25 ppm	ACGIH

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

Personal protective equipment

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

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant



Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

Filter type	: Combined particulates and acidic gas/vapor type
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	: viscous liquid
Color	: amber
Odor	: odorless
Odor Threshold	: No data available
pH	: 7 - 9
Melting point/freezing point	: 0 °C
Initial boiling point and boiling range	: 100 °C

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant



Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

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 : > 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 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

Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

Hazardous decomposition products

Thermal decomposition : Hydrofluoric acid
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 (Rat): > 5,000 mg/kg

|| Acute inhalation toxicity : Acute toxicity estimate (Rat): 0.005 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgment

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

Components:**Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

|| Acute oral toxicity : LD50 (Rat): > 1,000 mg/kg
Method: OECD Test Guideline 425
Assessment: The substance or mixture has no acute oral toxicity

|| Acute inhalation toxicity : Approximate Lethal Concentration (Rat): 0.047 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

|| Acute dermal toxicity : LD50 (Rat): > 1,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

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

Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

Assessment: Corrosive to the respiratory tract.
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
Result : No skin irritation

Components:

Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), 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

Components:

Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), 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.

Capstone™ FS-61 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 10/10/2020
11.0	01/19/2021	1336682-00042	Date of first issue: 02/27/2017

Components:**Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

Test Type	: Local lymph node assay (LLNA)
Routes of exposure	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
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.

Components:**Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

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

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

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.

Reproductive toxicity

|| Not classified based on available information.

Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
 Date of first issue: 02/27/2017

Components:**Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

Effects on fertility	:	Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 415 Result: negative Remarks: Based on data from similar materials
Effects on fetal development	:	Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative Remarks: Based on data from similar materials
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

|| Not classified based on available information.

STOT-repeated exposure

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

Components:**Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

Routes of exposure	:	Ingestion
Target Organs	:	Liver
Assessment	:	Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Capstone™ FS-61 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 10/10/2020
11.0	01/19/2021	1336682-00042	Date of first issue: 02/27/2017

Repeated dose toxicity**Components:****Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

Species	: Rat, male and female
LOAEL	: 3.6 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days
Method	: OECD Test Guideline 408
Remarks	: Based on data from similar materials

Species	: Rat, male
NOAEL	: 100 mg/kg
LOAEL	: 1,000 mg/kg
Application Route	: Skin contact
Exposure time	: 28 Days
Method	: OECD Test Guideline 410
Remarks	: Based on data from similar materials

Aspiration toxicity

|| Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to soil dwelling organisms	: LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg Exposure time: 14 d
	NOEC (Eisenia fetida (earthworms)): 125 mg/kg
	LOEC (Eisenia fetida (earthworms)): 250 mg/kg

Components:**Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 36.4 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)): > 3.24 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 22.44 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella sp. data type algae): 0.24 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.88 mg/l
Exposure time: 90 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)): 0.0093 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials



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

Components:

Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: Based on data from similar materials

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

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant



Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

Biodegradability : Result: Not readily biodegradable.

Bioaccumulative potential

Components:

Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:

Biaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 4
Remarks: Based on data from similar materials

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

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

Mobility in soil

No data available

Other adverse effects

Components:

Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts:

Additional ecological information : Information given is based on data on the ingredients and the ecotoxicology of similar products.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Reaction mass of mixed (3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl) phosphates, ammonium salts)

Class : 9
Packing group : III
Labels : 9

IATA-DGR

SAFETY DATA SHEET



Capstone™ FS-61 Fluorosurfactant

Version 11.0 Revision Date: 01/19/2021 SDS Number: 1336682-00042 Date of last issue: 10/10/2020
Date of first issue: 02/27/2017

UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Not applicable for product as supplied.

Domestic regulation

TDG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts)
Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant : yes (Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts)

Special precautions for user

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

SECTION 15. REGULATORY INFORMATION

Additional regulatory information

Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts

Capstone™ FS-61 Fluorosurfactant

Version	Revision Date:	SDS Number:	Date of last issue: 10/10/2020
11.0	01/19/2021	1336682-00042	Date of first issue: 02/27/2017

This product contains a substance subject to a Significant New Activity (SNAc) as disclosed in the Canada Gazette.

SECTION 16. 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.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
ACGIH / C	:	Ceiling limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA AB OEL / (c)	:	ceiling occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA BC OEL / C	:	ceiling limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value
CA QC OEL / C	:	Ceiling

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - 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, Bioaccumu-

SAFETY DATA SHEET

Capstone™ FS-61 Fluorosurfactant



Version	Revision Date:	SDS Number:	Date of last issue: 10/10/2020
11.0	01/19/2021	1336682-00042	Date of first issue: 02/27/2017

lative 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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

Revision Date : 01/19/2021
Date format : mm/dd/yyyy

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

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.

CA / Z8