

# SAFETY DATA SHEET

## SPARTAN CHARGE



Version	Revision Date:	SDS Number:	Date of last issue: 04/18/2023
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### SECTION 1. IDENTIFICATION

#### Product identifier

**Product name** SPARTAN CHARGE

#### Other means of identification

**Product code** 50002774

**Chemical nature** Mixture

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

**Recommended use** Can be used as herbicide only.

**Restrictions on use** Use as recommended by the label.

#### Details of the supplier of the safety data sheet

**Manufacturer** FMC Corporation  
2929 WALNUT ST  
PHILADELPHIA PA 19104  
USA  
(215) 299-6000  
SDS-Info@fmc.com

#### Emergency telephone

For leak, fire, spill or accident emergencies, call:  
1 800 / 424-9300 (CHEMTREC - U.S.A.)  
1 703 / 741-5970 (CHEMTREC - International)  
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:  
U.S.A. & Canada: +1 800 / 331-3148  
All other countries: +1 651 / 632-6793 (Collect)

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### SECTION 2. HAZARDS IDENTIFICATION

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

Flammable liquids : Category 4

Acute toxicity (Inhalation) : Category 4

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

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### GHS label elements

Hazard pictograms

:



Signal Word

: Warning

Hazard Statements

: H227 Combustible liquid.  
H332 Harmful if inhaled.  
H373 May cause damage to organs (hematopoietic system) through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**  
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
P260 Do not breathe mist or vapors.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ eye protection/ face protection.  
**Response:**  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P314 Get medical advice/ attention if you feel unwell.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
**Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

: Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Sulfentrazone	122836-35-5	$\geq 30 - < 50$
glycerol	56-81-5	$\geq 5 - < 10$
carfentrazone-ethyl (ISO)	128639-02-1	$\geq 1 - < 5$

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

General advice

: Move out of dangerous area.

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- Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.  
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Induce vomiting immediately and call a physician.  
Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Harmful if inhaled.  
May cause damage to organs through prolonged or repeated exposure.
- Notes to physician : Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Chlorinated compounds  
Fluorinated compounds  
Sulfur oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides  
Hydrogen cyanide  
Hydrogen chloride  
Fire may produce irritating, corrosive and/or toxic gases.  
Chlorine compounds  
Fluorine compounds
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Never return spills in original containers for re-use.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
For disposal considerations see section 13.

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Keep in suitable, closed containers for disposal.

### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.  
Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapors/dust.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking.  
Keep in a well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage : No decomposition if stored and applied as directed.

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age stability

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
glycerol	56-81-5	TWA (mist, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0
carfentrazone-ethyl (ISO)	128639-02-1	TWA (Inhalable particulate matter)	1 mg/m3	ACGIH

#### Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection  
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Protective measures : Plan first aid action before beginning work with this product.  
Always have on hand a first-aid kit, together with proper instructions.  
Ensure that eye flushing systems and safety showers are located close to the working place.  
Wear suitable protective equipment.
- Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	:	liquid
Color	:	yellow-orange
		off-white
Odor	:	solvent-like
Odor Threshold	:	No data available
pH	:	4 - 6
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 196 °F / 91 °C
		Method: closed cup Based on data from similar materials
Evaporation rate	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1.20 g/cm <sup>3</sup>
Bulk density	:	No data available
Solubility(ies)		
Water solubility	:	dispersible
Solubility in other solvents	:	No data available

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Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing

### SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Not applicable

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Harmful if inhaled.

#### Product:

Acute oral toxicity	:	LD50 Oral (Rat): > 5,000 mg/kg Remarks: Based on data from a similar product.
Acute inhalation toxicity	:	LC50 (Rat): > 2.27 mg/l Exposure time: 4 h Test atmosphere: dust/mist Remarks: Based on data from a similar product.
Acute dermal toxicity	:	LD50 Dermal (Rat): > 5,050 mg/kg Remarks: Based on data from a similar product.

#### Skin corrosion/irritation

Not classified based on available information.

#### Product:

Species	:	Rabbit
Result	:	slight irritation

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Remarks : Based on data from a similar product.

### Serious eye damage/eye irritation

Not classified based on available information.

#### Product:

Species	:	Rabbit
Result	:	slight irritation
Remarks	:	Based on data from a similar product.

### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

#### Respiratory sensitization

Not classified based on available information.

#### Components:

##### Sulfentrazone:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

##### carfentrazone-ethyl (ISO):

Species	:	Guinea pig
Method	:	US EPA Test Guideline OPP 81-6
Result	:	Does not cause skin sensitization.

### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### Sulfentrazone:

Genotoxicity in vitro	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Result: negative
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	:	Test Type: Mouse lymphoma assay Test system: mouse lymphoma cells Metabolic activation: Metabolic activation Result: negative
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Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal injection Result: negative
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Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

### glycerol:

Genotoxicity in vitro : Test Type: reverse mutation assay  
Result: negative

### carfentrazone-ethyl (ISO):

Genotoxicity in vitro : Test Type: reverse mutation assay  
Result: negative

Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster ovary cells  
Metabolic activation: Metabolic activation  
Result: negative

Test Type: Chromosome aberration test in vitro  
Test system: Chinese hamster ovary cells  
Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse (male and female)  
Result: negative

Germ cell mutagenicity - Assessment : No genotoxic potential.

### Carcinogenicity

Not classified based on available information.

### Components:

#### Sulfentrazone:

Species : Rat, male and female  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative

Species : Mouse, male and female  
Application Route : Ingestion  
Exposure time : 18 month(s)  
Result : negative

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

### glycerol:

Species : Rat  
Application Route : Oral  
Exposure time : 2 years Years  
Result : negative

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### **carfentrazone-ethyl (ISO):**

Species : Rat, male and female  
Application Route : Oral  
Exposure time : 104 weeks  
NOAEL : 3 - 9 mg/kg bw/day  
Result : negative

Species : Mouse, male and female  
Application Route : Oral  
Exposure time : 80 weeks  
NOAEL : > 7,000 ppm  
Result : negative

Species : Dog, male and female  
Exposure time : 52 weeks  
NOAEL : 150 mg/kg bw/day  
Result : negative

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

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

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

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

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **Sulfentrazone:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
General Toxicity Parent: NOEL: 13.7 - 16.2 mg/kg bw/day  
General Toxicity F1: NOEL: 13.7 - 16.2 mg/kg bw/day  
Symptoms: Maternal effects.

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOEL: 25 mg/kg bw/day  
Developmental Toxicity: NOEL: 10 mg/kg bw/day

Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: LOAEL: 50 mg/kg bw/day  
Developmental Toxicity: LOAEL F1: 25 mg/kg bw/day

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Symptoms: Skeletal malformations.

Target Organs: spleen

### glycerol:

Effects on fertility : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
Result: negative

Effects on fetal development : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
Result: negative

### carfentrazone-ethyl (ISO):

Effects on fertility : Test Type: Multi-generation study  
Species: Rat, male and female  
Application Route: Ingestion  
Fertility: NOEL: 4,000 ppm  
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: NOEL: 100 mg/kg bw/day  
Embryo-fetal toxicity.: NOEL: 600 mg/kg bw/day  
Result: negative

Test Type: Embryo-fetal development  
Species: Rabbit, female  
Application Route: Oral  
General Toxicity Maternal: NOEL: 150 mg/kg bw/day  
Embryo-fetal toxicity.: NOEL: > 300 mg/kg bw/day  
Result: negative

Reproductive toxicity - Assessment : Animal testing showed no reproductive toxicity.

### STOT-single exposure

Not classified based on available information.

### Components:

#### Sulfentrazone:

Remarks : No significant adverse effects were reported

#### carfentrazone-ethyl (ISO):

Remarks : No significant adverse effects were reported

### STOT-repeated exposure

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

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### **Components:**

#### **Sulfentrazone:**

Target Organs	:	hematopoietic system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

#### **carfentrazone-ethyl (ISO):**

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
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### **Repeated dose toxicity**

### **Components:**

#### **Sulfentrazone:**

Species	:	Rat, male
NOAEL	:	19.9 mg/kg
LOAEL	:	65.8 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90-days
Target Organs	:	hematopoietic system

Species	:	Mouse, male
NOAEL	:	60 mg/kg
LOAEL	:	108.4 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90-days
Target Organs	:	hematopoietic system

Species	:	Dog, male
NOAEL	:	28 mg/kg
LOAEL	:	57 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90-days
Target Organs	:	hematopoietic system

#### **glycerol:**

Species	:	Rat
LOAEL	:	1 mg/kg
Application Route	:	Inhalation
Exposure time	:	14 d
Dose	:	0, 1, 1.93, 3.91 mg/L
Symptoms	:	respiratory tract irritation, Fatality

Species	:	Rat
NOAEL	:	0.165 mg/l
LOAEL	:	0.662 mg/l
Application Route	:	Inhalation
Exposure time	:	13 w
Dose	:	0, 0.033, 0.165, 0.662 mg/L
Symptoms	:	respiratory tract irritation

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### **carfentrazone-ethyl (ISO):**

Species	: Rat, male and female
NOEL	: 1000 ppm
Application Route	: Oral
Exposure time	: 90 days

Species	: Rat, male and female
NOEL	: 1000 ppm
Application Route	: Dermal
Exposure time	: 21 days

### **Aspiration toxicity**

Not classified based on available information.

### **Components:**

#### **Sulfentrazone:**

The substance does not have properties associated with aspiration hazard potential.

#### **carfentrazone-ethyl (ISO):**

The substance does not have properties associated with aspiration hazard potential.

### **Neurological effects**

### **Components:**

#### **carfentrazone-ethyl (ISO):**

No neurotoxicity observed in animal studies.

### **Further information**

### **Product:**

Remarks : No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

### **Components:**

#### **Sulfentrazone:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l Exposure time: 96 h
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Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 60.4 mg/l Exposure time: 48 h
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Toxicity to algae/aquatic plants	: EC50 (algae): 32.8 mg/l Exposure time: 72 h
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EC50 (*Pseudokirchneriella subcapitata* (green algae)): 0.031 mg/l

Exposure time: 120 h

EC50 (*Lemna gibba* (duckweed)): 0.0288 mg/l

Exposure time: 14 d

EC50 (*Navicula pelliculosa* (Diatom)): 0.042 mg/l

Exposure time: 120 h

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 5.9 mg/l  
Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Crustaceans): 0.51 mg/l  
Exposure time: 21 d

Toxicity to terrestrial organisms : LD50 (*Anas platyrhynchos* (Mallard duck)): > 5,620 mg/kg

LD50 (*Apis mellifera* (bees)): > 200 µg/bee

End point: Acute contact toxicity

LD50 (*Apis mellifera* (bees)): > 25 µg/bee

End point: Acute oral toxicity

### glycerol:

Toxicity to fish : LC50 (Fish): 885 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 1,955 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (*Scenedesmus capricornutum* (fresh water algae)): 2,900 mg/l  
Exposure time: 192 h

Toxicity to microorganisms : EC10 (*Pseudomonas putida*): 10,000 mg/l  
Exposure time: 16 h

### carfentrazone-ethyl (ISO):

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 1.6 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): > 9.8 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (*Anabaena flos-aquae* (cyanobacterium)): 0.012 mg/l  
Exposure time: 72 h

NOEC (algae): 0.001 mg/l

Exposure time: 96 h

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	EC50 (Lemna gibba (gibbous duckweed)): 0.0057 mg/l Exposure time: 14 d
Toxicity to fish (Chronic toxicity)	: NOEC (Oncorhynchus mykiss (rainbow trout)): 0.11 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Crustaceans): 0.22 mg/l Exposure time: 21 d
Toxicity to soil dwelling organisms	: LC50 (Eisenia fetida (earthworms)): > 820 mg/kg
Toxicity to terrestrial organisms	: LD50 (Anas platyrhynchos (Mallard duck)): > 5,620 ppm End point: Acute oral toxicity Remarks: Dietary
	LD50 (Colinus virginianus (Bobwhite quail)): > 5,620 ppm End point: Acute oral toxicity Remarks: Dietary
	LD50 (Apis mellifera (bees)): > 200 µg/bee End point: Acute oral toxicity
	LD50 (Apis mellifera (bees)): > 200 µg/bee End point: Acute contact toxicity

### Persistence and degradability

#### Components:

##### **Sulfentrazone:**

Biodegradability	: Result: Not readily biodegradable.
Stability in water	: Degradation half life (DT50): 2.22 - 9.56 h
Photodegradation	: Remarks: Decomposes rapidly in contact with light.

##### **glycerol:**

Biodegradability	: Result: Readily biodegradable. Biodegradation: 94 % Exposure time: 24 h
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##### **carfentrazone-ethyl (ISO):**

Biodegradability	: Result: Not readily biodegradable.
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### Bioaccumulative potential

#### Components:

##### **Sulfentrazone:**

Bioaccumulation	: Remarks: Bioaccumulation is unlikely.
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Partition coefficient: n-octanol/water : Pow: 9.8  
pH: 7

### glycerol:

Partition coefficient: n-octanol/water : log Pow: -1.75 (77 °F / 25 °C)  
pH: 7.4

### carfentrazone-ethyl (ISO):

Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 176  
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 3.36 (68 °F / 20 °C)

### Mobility in soil

#### Components:

#### **Sulfentrazone:**

Mobility : Medium: Water  
Remarks: Predicted distribution to environmental compartments

Distribution among environmental compartments : Koc: 43 ml/g, log Koc: 1.63  
Remarks: Highly mobile in soils

Stability in soil : Remarks: Very persistent in soil.

### carfentrazone-ethyl (ISO):

Distribution among environmental compartments : Remarks: The substance/mixture and its soil metabolites have a potential for being mobile, but were not detected in a field leaching study.

Koc: 866, log Koc: 2.93

### Other adverse effects

#### Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.



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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

- UN number : UN 3082
- Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Sulfentrazone, Carfentrazone-ethyl)
- Class : 9
- Packing group : III
- Labels : 9

##### IATA-DGR

- UN/ID No. : UN 3082
- Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(Sulfentrazone, Carfentrazone-ethyl)
- 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.  
(Sulfentrazone, Carfentrazone-ethyl)
- 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

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### 49 CFR

Not regulated as a dangerous good

### 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

### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
butan-1-ol	71-36-3	100	100 (F003)
ethylbenzene	100-41-4	100	100 (F003)

### 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** : No SARA Hazards

**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.

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

glycerol      56-81-5       $\geq 5 - < 10 \%$

### Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

ethylbenzene      100-41-4       $\geq 0 - < 0.1 \%$

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

ethylbenzene      100-41-4       $\geq 0 - < 0.1 \%$

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

### US State Regulations

### Massachusetts Right To Know

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glycerol	56-81-5
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### Pennsylvania Right To Know

water	7732-18-5
Sulfentrazone	122836-35-5
glycerol	56-81-5
butyl benzoate	136-60-7
carfentrazone-ethyl (ISO)	128639-02-1

### Maine Chemicals of High Concern

octamethylcyclotetrasiloxane [D4]	556-67-2
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### Vermont Chemicals of High Concern

ethylbenzene	100-41-4
octamethylcyclotetrasiloxane [D4]	556-67-2

### Washington Chemicals of High Concern

ethylbenzene	100-41-4
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### California Prop. 65

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

### California Permissible Exposure Limits for Chemical Contaminants

glycerol	56-81-5
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### The ingredients of this product are reported in the following inventories:

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.  Sulfentrazone  CFZ 21.3 EW (Reformulated Aim EW for Spartan Charge)  Smectite-group minerals
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

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### TSCA list

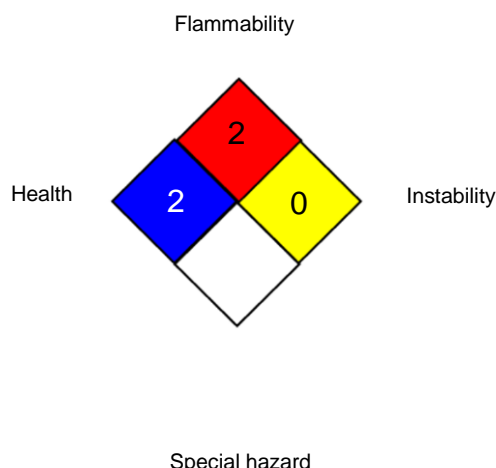
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



0 No health threat, 1 Slightly Hazardous, 2 Hazardous, 3 Extreme danger, 4 Deadly

#### HMIS® IV:

HEALTH	*	2
FLAMMABILITY		2
PHYSICAL HAZARD		0

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

### Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil

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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

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End of Material Safety Data Sheet