

SAFETY DATA SHEET



AUTHORITY EDGE HERBICIDE

Version 1.1 Revision Date: 06/08/2023 SDS Number: 50001325 Date of last issue: -
Date of first issue: 06/05/2019

GHS label elements

Hazard pictograms



Signal Word

: Warning

Hazard Statements

: H302 Harmful if swallowed.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
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.
Response:
P314 Get medical attention if you feel unwell.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P330 Rinse mouth.
P391 Collect spillage.
Storage:
P405 Store locked up.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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	29.2
Pyoxasulfone	447399-55-5	14.9
propane-1,2-diol	57-55-6	>= 5 - < 10
sodium diisopropyl-naphthalenesulphonate	1322-93-6	>= 1 - < 5
toluene	108-88-3	>= 1 - <= 5

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SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
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 swallowed.
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, CO₂, 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 : No hazardous combustion products are known
- 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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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.
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 : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and 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 stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
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		(Form of exposure)	ters / Permissible concentration	
propane-1,2-diol	57-55-6	TWA	10 mg/m3	US WEEL

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
Wear face-shield and protective suit for abnormal processing problems.
- 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : cream
white
- Odor : neutral
- Odor Threshold : No data available
- pH : 5.29 (76.8 °F / 24.9 °C)

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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.
Conditions to avoid : Heat.
Incompatible materials : Not applicable
Hazardous decomposition products : irritating gases

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.
Harmful if inhaled.

Product:

Acute oral toxicity : LD50 Oral (Rat): 1,098 mg/kg
GLP: yes
Acute inhalation toxicity : LD50 (Rat): > 1.15 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
GLP: yes
Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Skin corrosion/irritation

Not classified based on available information.

Product:

Species : Rabbit
Result : slight irritation
Remarks : May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species : Rabbit
Result : slight irritation
Remarks : May irritate eyes.

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Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Test Type	:	Local lymph node test
Species	:	Mouse
Result	:	Not a skin sensitizer.

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.
-------------------------------------	---	--

Pyroxasulfone:

Genotoxicity in vitro	:	Test Type: Ames test Result: negative
-----------------------	---	--

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

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

Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Result: negative
----------------------	---	--

Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.
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propane-1,2-diol:

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

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

sodium diisopropylnaphthalenesulphonate:

Genotoxicity in vitro : Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Remarks: No data available

toluene:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration test in vitro
Species: Rat
Result: negative

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.

Pyroxasulfone:

Species : Rat, male
Exposure time : 2 Years
: 2.2 mg/kg bw/day
Result : positive
Target Organs : Bladder

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Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

propane-1,2-diol:

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

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
Symptoms: Skeletal malformations.
Target Organs: spleen

Pyroxasulfone:

propane-1,2-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Mouse
Application Route: Oral

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Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 414
Result: Animal testing did not show any effects on fertility.
Remarks: Based on data from similar materials

toluene:

Effects on fetal development : Species: Rat
Application Route: Inhalation
Result: Teratogenic effects.
Remarks: Adverse developmental effects were observed

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

STOT-single exposure

Not classified based on available information.

Components:

Sulfentrazone:

Remarks : No significant adverse effects were reported

toluene:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Sulfentrazone:

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

Pyroxasulfone:

Target Organs : Nervous system, Kidney, Liver, Cardio-vascular system, Bladder
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

toluene:

Routes of exposure : Inhalation
Target Organs : inner ear
Assessment : The substance or mixture is classified as specific target organ

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toxicant, repeated exposure, category 2.

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

propane-1,2-diol:

Species : Rat, male and female
NOAEL : 1,700 mg/kg
Application Route : Oral
Exposure time : 2 Years

Species : Rat, male and female
NOAEL : 1,000 mg/kg
LOAEL : 160 mg/kg
Application Route : Inhalation
Exposure time : 90 Days

sodium diisopropylnaphthalenesulphonate:

Remarks : No data available

toluene:

Species : Rat
NOAEL : 625 mg/kg
Application Route : Oral
Symptoms : central nervous system effects

Species : Rat
NOAEL : 0.098 mg/l
Application Route : Inhalation

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Test atmosphere : vapor
Species : Rat
LOAEL : 2.261 mg/l
Application Route : Inhalation
Test atmosphere : vapor

Aspiration toxicity

Not classified based on available information.

Components:

Sulfentrazone:

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

toluene:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Sulfentrazone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 60.4 mg/l
aquatic invertebrates : Exposure time: 48 h

Toxicity to algae/aquatic : EC50 (algae): 32.8 mg/l
plants : Exposure time: 72 h

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

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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

Pyroxasulfone:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 202 mg/l
Exposure time: 96 h

LL50 (Lepomis macrochirus (Bluegill sunfish)): > 208 mg/l
Exposure time: 96 h

LL50 (Cyprinodon variegatus (sheepshead minnow)): > 3.3 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 4.4 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (green algae): 0.000743 mg/l
Exposure time: 72 h

EC50 (Lemna gibba (duckweed)): 0.00043 mg/l
Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 2 mg/l
Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.9 mg/l
Exposure time: 21 d

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 997 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Apis mellifera (bees)): > 100 µg/bee
Exposure time: 48 d
Remarks: Contact

LOEC (Anas platyrhynchos (Mallard duck)): 60 mg/kg
End point: Reproduction Test

propane-1,2-diol:

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- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l
Exposure time: 96 h
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 34,100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 201
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 13,020 mg/l
Exposure time: 7 d
- Toxicity to microorganisms : EC50 (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

sodium diisopropylnaphthalenesulphonate:

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 72 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
- NOEC (Pseudokirchneriella subcapitata (algae)): 10 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

toluene:

- Toxicity to fish : LC50 (Fish): 5.5 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50: 3.78 mg/l
Exposure time: 48 h
- Toxicity to algae/aquatic plants : NOEC (Skeletonema costatum (marine diatom)): 10 mg/l
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus kisutch (coho salmon)): 1.4 mg/l
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia sp.): 0.74 mg/l
Exposure time: 7 d
- Toxicity to microorganisms : EC50 (Bacteria): 134 mg/l
Exposure time: 3 h

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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.

Pyroxasulfone:

Biodegradability : Result: Not readily biodegradable.

propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 23.6 %
Exposure time: 64 d
Method: OECD Test Guideline 306

sodium diisopropyl naphthalenesulphonate:

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Not readily biodegradable.
Biodegradation: 2 %
Exposure time: 21 d
Method: OECD Test Guideline 301D

toluene:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Components:

Sulfentrazone:

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

Pyroxasulfone:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water : log Pow: 2.39 (77 °F / 25 °C)

propane-1,2-diol:

Partition coefficient: n-octanol/water : log Pow: -1.07

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sodium diisopropylnaphthalenesulphonate:

Partition coefficient: n-octanol/water : log Pow: > 2.6 (68 °F / 20 °C)

toluene:

Bioaccumulation : Bioconcentration factor (BCF): 90

Partition coefficient: n-octanol/water : log Pow: 2.73 (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.

Pyroxasulfone:

Distribution among environmental compartments : Adsorption/Soil
Koc: 57 - 114 ml/g, log Koc: > 1.75
Remarks: Highly mobile in soils

Stability in soil :

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.

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 chemi-

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cal 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.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

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

IATA-DGR

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

49 CFR

UN/ID/NA number : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Pyroxasulfone, Sulfentrazone)
Class : 9
Packing group : III
Labels : CLASS 9

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ERG Code : 171
Marine pollutant : yes
Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO. 49CFR: no dangerous good in non-bulk packaging

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)
ammonia, anhydrous	7664-41-7	100	

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ammonia, anhydrous	7664-41-7	100	

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 : Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

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):

propane-1,2-diol 57-55-6 >= 5 - < 10 %

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Clean Water Act

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

ammonia, anhydrous 7664-41-7 >= 0 - < 0.1 %

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

ammonia, anhydrous 7664-41-7 >= 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

ammonia, anhydrous 7664-41-7

Pennsylvania Right To Know

water 7732-18-5
2',4'-DICHLORO-5'-(4-DIFLUOROMETHYL-4,5-DIHYDRO-3-METHYL-5-OXO-1H-1,2,4-TRIAZOL-1-YL)METHANESULFONANILIDE Not Assigned
Pyoxasulfone 447399-55-5
propane-1,2-diol 57-55-6
sodium sulphate 7757-82-6
ammonia, anhydrous 7664-41-7

Maine Chemicals of High Concern

octamethylcyclotetrasiloxane [D4] 556-67-2

Vermont Chemicals of High Concern

octamethylcyclotetrasiloxane [D4] 556-67-2

Washington Chemicals of High Concern

Product does not contain any listed chemicals

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.

AICS : Not in compliance with the inventory

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

Pyoxasulfone

BENTONE EW

2',4'-DICHLORO-5'-(4-DIFLUOROMETHYL-4,5-DIHYDRO-3-METHYL-5-OXO-1H-1,2,4-TRIAZOL-1-YL)METHANESULFONANILIDE

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

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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

TSCA list

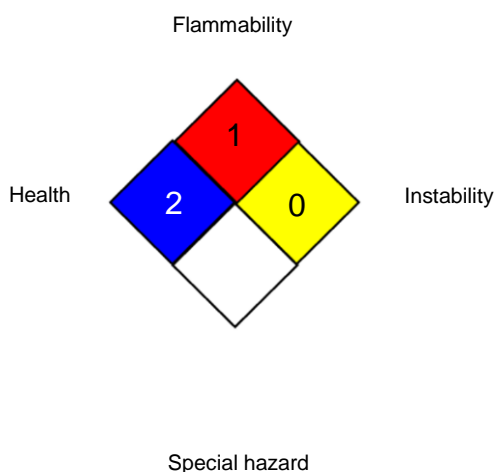
No substances are subject to a Significant New Use Rule.

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	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		0

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

Full text of other abbreviations

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)
US WEEL / TWA : 8-hr TWA

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 Har-

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monized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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End of Material Safety Data Sheet