

SECTION 1 Identification

1.1. GHS Product identifier

Product form : Mixture
 Trade name : VALTERA CEREALS

1.2. Other means of identification

Other means of identification : Product Registration Number: 35619

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Pre-seeding application for pre-emergence residual and selective post-emergence weed control or suppression for spring wheat (including durum) and winter wheat.

1.4. Supplier's details

Nufarm Agriculture Inc.
 5101, 333 - 96th Ave NE
 Calgary, Alberta T3K 0S3
 Canada
 T 1-800-868-5444
www.nufarm.com

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
 Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
 CCN 16105
 Back-up Emergency Number: +1 703-741-5970 (Washington, DC)
 For health or environmental emergencies, Propharma Group, 1-877-325-1840
 For product and use information, Nufarm Agriculture Inc, 1-800-868-5444

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Reproductive toxicity, Category 2 H361 Suspected of damaging fertility or the unborn child.
 Full text of H statements : see section 16

2.2. GHS label elements, including precautionary statements

GHS CA labeling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Warning
 Hazard statements (GHS CA) : Suspected of damaging fertility or the unborn child
 Precautionary statements (GHS CA) : Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear protective gloves, protective clothing, eye and face protection.
 IF exposed or concerned: Get medical advice or attention.
 Store locked up.

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according to SOR/2015-17, Hazardous Products Regulations (HPR)

Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Flumioxazin	flumioxazin (ISO); 2-[7-fluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione	CAS-No.: 103361-09-7	25.24 – 26.8	Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Florasulam	florasulam (ISO), 2',6',8-trifluoro-5-methoxy-5-triazolo[1,5-c], pyrimidine-2-sulfonilide	CAS-No.: 145701-23-1	1.72 – 1.9	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,2-benzisothiazol-3(2H)-one	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5	0.05 – 0.07	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

Comments

: Contains 1,2-benzisothiazolin-3-one at 0.02% or 0.04% as a preservative
OR
Contains 1,2-benzisothiazolin-3-one at 0.008% or 0.01% or 0.03% and 5-chloro-2-methyl-4-isothiazolin-3-one at 0.0004% or 0.0007% or 0.001% and 2-methyl-4-isothiazolin-3-one at 0.0001% or 0.0002% or 0.0004% as preservatives
OR
Contains 5-chloro-2-methyl-4-isothiazolin-3-one at 0.001% and 2-methyl-4-isothiazolin-3-one at 0.0004% or 0.0005% as preservatives

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SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious: Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a poison center/doctor/physician if you feel unwell.
First-aid measures general	: First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but, not mouth-to-mouth. IF exposed or concerned: Get medical advice/attention.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: Inhalation may cause irritation, cough, shortness of breath.
Symptoms/effects after skin contact	: Repeated or prolonged contact may cause slight irritation to the skin.
Symptoms/effects after eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/effects after ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.
Most Important Symptoms/Effects	: Suspected of damaging fertility or the unborn child.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Use extinguishing agent suitable for surrounding fire. Dry chemical, CO ₂ , or water spray or regular foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Fluorinated compounds. Carbon dioxide. Carbon monoxide. Nitrogen oxides. Hydrogen sulfide. Hydrogen fluoride.

5.3. Special protective actions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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according to SOR/2015-17, Hazardous Products Regulations (HPR)

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all personal contact including breathing in the mist, spray, vapors. Do not take actions involving personal risks. Absorb spillage to prevent material-damage. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.
- Environmental precautions : Very toxic to aquatic life with long lasting effects. Follow product instructions and best practices for use to avoid misapplications of the product. Do not negligently allow product to enter off-target drains, sewers, or ground water.

6.2. Methods and materials for containment and cleaning up

- For containment : Contain with non-combustible inert absorbent.
- Methods for cleaning up : Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spilt product. Decontaminate surfaces and equipment with water and detergent. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

For further information refer to section 8: "Exposure controls/personal protection", For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing spray. Take precautionary measures against static discharge.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in original container. Store in a cool, dry and well-ventilated area away from incompatible substances. Keep out of reach of children. Store in a closed container.
- Incompatible products : Oxidizing agents.
- Storage area : Keep separate from food, feedstuffs, fertilizers and other sensitive material.
- Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Handle in accordance with good industrial hygiene and safety procedures.
- Environmental exposure controls : Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

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according to SOR/2015-17, Hazardous Products Regulations (HPR)

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Hand protection:

Chemically resistant protective gloves

Eye protection:

Chemical goggles or face shield

Skin and body protection:

Wear suitable protective clothing. Groundboom - Open Cab: . Tyvek® Gown/Coveralls. Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair.

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Opaque.
Color	: White
Odor	: Mild Sweet
Odor threshold	: No data available
pH	: 4.3 1% dispersion
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 110 °C / > 230 °F
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 1.1 g/cm ³ @ 26 °C / 78.8 °F
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 545.455 – 818.182 mm ² /s
Viscosity, dynamic	: 600 – 900 cP

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Explosion limits : No data available
Particle characteristics : No data available

Flumioxazin	
Particle characteristics	No data available

Florasulam	
Particle characteristics	No data available

1,2-benzisothiazol-3(2H)-one	
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability : Stable under normal conditions of use.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : Incompatible materials.
Incompatible materials : Strong oxidizers.
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Fluorinated compounds. Nitrogen oxides. Carbon dioxide. Carbon monoxide. Hydrogen sulfide. Hydrogen fluoride.
Hardening time: : No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

VALTERA CEREALS	
LD50 oral	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg
LC50 Inhalation - Rat	> 5.66 mg/l

1,2-benzisothiazol-3(2H)-one	
LD50 dermal rat	> 2000 mg/kg body weight
Skin corrosion/irritation	: Not classified pH: 4.3 1% dispersion

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Additional information	Slightly irritating to rabbits on cutaneous application
Serious eye damage/irritation	: Not classified pH: 4.3 1% dispersion

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Additional information	Slightly irritating to rabbit on ocular application

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Respiratory or skin sensitization : Not classified

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Additional information	Not a dermal sensitizer in mice by local lymph node assay (LLNA)
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1,2-benzisothiazol-3(2H)-one

Additional information	Guinea pig maximization test - Sensitizing
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Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

1,2-benzisothiazol-3(2H)-one

NOAEL (animal/female, F0/P)	112 mg/kg body weight
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NOAEL (animal/female, F1)	56.6 mg/kg body weight
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STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

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Viscosity, kinematic	545.455 – 818.182 mm ² /s
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Symptoms/effects after inhalation : Inhalation may cause irritation, cough, shortness of breath.

Symptoms/effects after skin contact : Repeated or prolonged contact may cause slight irritation to the skin.

Symptoms/effects after eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use.

Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

Most Important Symptoms/Effects : Suspected of damaging fertility or the unborn child.

SECTION 12 Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life

Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects

1,2-benzisothiazol-3(2H)-one

LC50 - Fish [1]	≈ 16.7 mg/l
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LC50 - Fish [2]	2.15 mg/l
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EC50 - Crustacea [1]	2.94 mg/l
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EC50 - Crustacea [2]	2.9 mg/l
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12.2. Persistence and degradability

VALTERA CEREALS

Persistence and degradability	Not rapidly degradable
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Flumioxazin

Persistence and degradability	Not rapidly degradable
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Florasulam	
Persistence and degradability	Not rapidly degradable
1,2-benzisothiazol-3(2H)-one	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations. Refer to all applicable national, international and local regulations or provisions.
Additional information	: Do not re-use empty containers.
Ecological waste information	: Avoid release to the environment.

SECTION 14 Transport information

In accordance with TDG / IMDG / IATA

TDG	IMDG	IATA
14.1. UN Number		
UN3082	3082	3082
14.2. UN Proper Shipping Name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Flumioxazin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUMIOXAZIN)	Environmentally hazardous substance, liquid, n.o.s. (Flumioxazin)
14.3. Transport hazard class(es)		
9	9	9
14.4. Packing group, if applicable		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes

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according to SOR/2015-17, Hazardous Products Regulations (HPR)

TDG	IMDG	IATA
DOT Note: Material is not hazardous when shipped less than 119 gallons.		

14.6. Special precautions for user

TDG

UN-No. (TDG)	: UN3082
TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the danger or dangers posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS, 99 - (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, may be offered for transport, handled or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means of containment and during transport. (2) These Regulations, except for Parts 1 and 2, do not apply to the offering for transport, handling or transport of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no release of the dangerous goods that could endanger public safety.
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E1
Emergency Response Guide (ERG) Number	: 171

IMDG

Special provision (IMDG)	: 274, 335, 375, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A

IATA

PCA Excepted quantities (IATA)	: E1
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PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
ERG code (IATA)	: 9L

14.7. Transport in bulk according to Annex II of MARPOL 73/78⁹ and the IBC Code¹⁰

Not applicable

SECTION 15 Regulatory information

Flumioxazin (103361-09-7)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

Florasulam (145701-23-1)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

1,2-benzisothiazol-3(2H)-one (2634-33-5)

Listed on the Canadian DSL (Domestic Substances List)

Flumioxazin (103361-09-7)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Florasulam (145701-23-1)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

1,2-benzisothiazol-3(2H)-one (2634-33-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16 Other Information

Issue date : 11-07-2025

Full text of hazard classes and H-statements:

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H330	Fatal if inhaled
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life

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Full text of hazard classes and H-statements:

H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.