LyNx
Safety Data Sheet

Revision Date 07/11/2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name LYNX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance / Mixture

- Urease Inhibitor
- Agrochemicals

Remarks

- For professional and industrial installation and use only.

1.3 Details of the supplier of the safety data sheet

Manufacturing Company

CYTEC CANADA INC.
9061 Garner Road Niagara Falls,
Ontario, Canada L2H 0Y2
Tel: +1-905-356-9000

Supplier

Northern Nutrients Ltd.
Site 3, Township Road 360,
Saskatoon, SK, Canada, S7K 3J8

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although WHMIS has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects

2.1 Classification of the substance or mixture

Hazardous Products Regulations (WHMIS 2015)

Serious eye damage, Category 1	H318: Causes serious eye damage.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Hazardous Products Regulations (WHMIS 2015)

Pictogram

Signal Word

- Danger

Hazard Statements

- H318 Causes serious eye damage.
- H361 Suspected of damaging fertility or the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- Repeated or prolonged contact with skin may cause dermatitis
- Inhalation may provoke the following symptoms:
- Nausea
- Nose bleeding
- May cause
- garlic-like odor of the breath

SECTION 3: Composition/information on ingredients

3.1 Substance

- Not applicable, this product is a mixture.

3.2 Mixture

WHMIS Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [% wt/wt or V/V]
Methane, 1,1'-sulfinylbis-	67-68-5	>= 50 - < 60
N-(n-butyl)thiophosphoric triamide	94317-64-3	>= 20 - < 25
Proprietary additive	*****	>= 1 - < 5
Proprietary additive	*****	>= 1 - < 5

SECTION 4: First aid measures

Description of first-aid measures
General advice

- First responder needs to protect himself.
- Show this material safety data sheet to the doctor in attendance.
- Place affected apparel in a sealed bag for subsequent decontamination.
- When symptoms persist or in all cases of doubt seek medical advice.

In case of inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Keep patient warm and at rest.
- Consult a physician.
- Get medical attention immediately if symptoms occur.

In case of skin contact

- Take off contaminated clothing and shoes immediately.
- Wash off immediately with soap and plenty of water.
- Use a mild soap if available.

- Consult a physician.

- If skin irritation occurs, seek medical advice/attention.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids.
- Take victim immediately to hospital.
- Continue rinsing eyes during transport to hospital.

In case of ingestion

- Do not induce vomiting without medical advice.
- Rinse mouth with water.
- Do not give anything to drink.
- Keep at rest.
- Consult a physician.

4.1 Most important symptoms and effects, both acute and delayed

Symptoms

- Symptoms will depend on the target organs.

4.2 Indication of any immediate medical attention and special treatment needed

Notes to physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Extinguishing media - small fires
- Water spray
- Multipurpose powders
- Carbon dioxide (CO2)

- Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF)
- Extinguishing media - large fires
- Water spray
- Multipurpose powders
- Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF)

Unsuitable extinguishing media

- Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

- The pressure in sealed containers can increase under the influence of heat.

- In case of heating:
- Harmful or toxic vapors are released.

- Hazardous decomposition products formed under fire conditions.
- High concentrations of toxic or harmful products may remain in the residual liquid once the fire has been extinguished.

Hazardous combustion products:

- Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- Sulfur oxides
- Formaldehyde
- Methanethiol
- Sulfur compounds
- Phosphorus compounds
- Nitrogen oxides (NOx)
- Ammonia
- Hydrogen cyanide (hydrocyanic acid)

5.3 Advice for firefighters

Special protective equipment for fire-fighters

- Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.
- Personal protective equipment comprising suitable protective gloves, safety goggles and protective clothing

Specific firefighting methods

- Stay upwind.

- Fight fire with normal precautions from a reasonable distance.

- Do not use a solid water stream as it may scatter and spread fire.
- Cool down the containers / equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product.
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information

- Evacuate personnel to safe areas.

- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- Never approach containers which have been exposed to fire, without cooling them sufficiently.

- 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Immediately evacuate personnel to safe areas.
- Stay upwind.
- Only qualified personnel equipped with suitable protective equipment may intervene.

- Avoid inhalation, ingestion and contact with skin and eyes.
- Wear chemical resistant personal protective equipment
- Wear suitable gloves.
- Wear suitable protective clothing.

- Respiratory protection

- Wear as appropriate:
- Face-shield
- Tightly fitting safety goggles

- In the case of dust or aerosol formation use respirator with an approved filter.
- In the case of vapor formation use a respirator with an approved filter.

- Stop leak if safe to do so.

- If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire service).

- For further information refer to section 8 "Exposure controls / personal protection."

6.2 Environmental precautions

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

- Prevent further leakage or spillage if safe to do so.
- Contain the spilled material by diking.
- The product should not be allowed to enter drains, water courses or the soil.

- Local authorities should be advised if significant spillages cannot be contained.
- If the product contaminates rivers and lakes or drains inform respective authorities.
- If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal.

6.3 Methods and materials for containment and cleaning up

- Stop leak if safe to do so.
- Dam up with sand or inert earth (do not use combustible materials).

- Control the vapors with:
- Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF)

- Soak up with inert absorbent material (e.g., sand, silica gel, acid binder, universal binder).
- Shovel or sweep up.
- Keep in suitable, closed containers for disposal.
- Never return spills in original containers for re-use.

- Wash with plenty of water and detergent.
- Clean contaminated surface thoroughly.
- Recover the cleaning water for subsequent disposal.

- Decontaminate tools, equipment and personal protective equipment in a segregated area.
- Dispose of as hazardous waste in compliance with local and national regulations.

Additional advice

- Mark the contaminated area with signs and prevent access to unauthorized personnel.
- Only qualified personnel equipped with suitable protective equipment may intervene.
- Following decontamination, wait several hours before allowing anyone to enter the area.
- Material can create slippery conditions.

6.4 Reference to other sections

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety practice.
- The product must only be handled by specifically trained employees.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Vapor extraction at source
- Do not use in areas without adequate ventilation.
- Do NOT handle in a confined space.
- Extracted air must not be allowed to return to the workplace.
- Wear personal protective equipment.
- Wear suitable protective clothing.
- Avoid inhalation, ingestion and contact with skin and eyes.
- Do NOT handle without gloves.
- Do NOT handle if hands have any cuts or wounds.
- Avoid splashes.
- Avoid formation of aerosol.
- Pregnant or breastfeeding workers should not be occupied in the blending and high temperature processing operations.
- For personal protection see section 8.

Hygiene measures

- Personal hygiene is an important work practice exposure control measure, and the following general measures should be taken when working with or handling these materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.
- Exposed employees should have regular medical check-ups

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Keep in a contained area
- The floor of the storage area should be impermeable and designed to form a water-tight basin.
- Keep locked up or in an area accessible only to qualified or authorized persons.
- Keep containers tightly closed in a dry, cool and well-ventilated place.
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep away from incompatible materials to be indicated by the manufacturer
- Keep away from: Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: "Stability-Reactivity").

Packaging material

Suitable material
- Plastic materials.

Requirements for storage rooms and vessels

Recommended storage temperature: 3 - 95 °F (-16 - 35 °C)

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

- no data available

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Control measures

Engineering measures
- Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures:
- Effective exhaust ventilation system
- Ensure adequate ventilation.
- Extract at emission point.
- Ensure that extracted air cannot be returned to the workplace through the ventilation system.
- Avoid splashes.
- Avoid formation of aerosol.

Individual protection measures

Respiratory protection
- This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
- When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.
- If mist is formed:
- If vapor is released:

- Wear a positive-pressure supplied-air respirator with full facepiece.

Hand protection
- Where there is a risk of contact with hands, use appropriate gloves
- Gloves must be inspected prior to use.
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Suitable material
- butyl-rubber

Eye protection
- Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.
- Eye contact should be prevented by:
- Tightly fitting safety goggles
- Face-shield

Skin and body protection
- Full protective suit
- Footwear protecting against chemicals
- Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Hygiene measures
- Personal hygiene is an important work practice exposure control measure, and the following general measures should be taken when working with or handling these materials:
- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.
- The user is responsible for monitoring the working environment in accordance with local laws and regulations.
- Exposed employees should have regular medical check-ups

Protective measures
- Emergency equipment immediately accessible, with instructions for use.
- Ensure that eyewash stations and safety showers are close to the workstation location.
- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.
- The protective equipment must be selected in accordance with current local regulations and in cooperation with the supplier of the protective equipment.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	liquid
Color	blue

Odor	pungent Do not attempt to smell the product as it is hazardous.
Odor Threshold	No data available
Melting point/freezing point	Freezing point: < 14 °F (-10 °C)
Initial boiling point and boiling range	Boiling point/boiling range: 23 - 95 °F (-5 - 35 °C)
Flammability (solid, gas)	No data available
Flammability (liquids)	No data available
Flammability / Explosive limit	No data available
Flash point	205 °F (96 °C) Method: Seta closed cup Flammability class: Will burn
Autoignition temperature	No data available
Decomposition temperature	No data available
pH	10.0 - 11.0 (1 %)
Viscosity	Viscosity, dynamic: < 100 mPa.s (68 °F (20 °C))
Solubility	Water solubility: Hydrolyzes slowly.
Partition coefficient: n-octanol/water	No data available
Vapor pressure	No data available
Density	1.15 g/cm3 (68 °F (20 °C))
Relative density	1.12 - 1.18 (68 °F (20 °C))
Relative vapor density	No data available
Particle characteristics	No data available
Evaporation rate (Butylacetate = 1)	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

- Stable at normal ambient temperature and pressure.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No dangerous reaction known under conditions of normal use.

- Hazardous polymerization does not occur.

10.4 Conditions to avoid

- Keep away from open flames, hot surfaces and sources of ignition.
- Avoid excessive heat for prolonged periods of time.

10.5 Incompatible materials

- Strong acids
- Strong bases
- Strong oxidizing agents
- reactive metals (Al, K, Zn ...).
- Acid halides

10.6 Hazardous decomposition products

- Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- Sulfur oxides
- Formaldehyde
- Methanethiol
- Sulfur compounds
- Phosphorus compounds
- Nitrogen oxides (NOx)
- Ammonia
- Hydrogen cyanide (hydrocyanic acid)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	Not classified as hazardous for acute oral toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute inhalation toxicity	Not classified as hazardous for acute inhalation toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute dermal toxicity	Not classified as hazardous for acute dermal toxicity according to GHS. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Acute toxicity (other routes of administration)	Not applicable
Skin corrosion/irritation	Mild skin irritation According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Serious eye damage/eye irritation	Risk of serious damage to eyes. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Respiratory or skin sensitization	Does not cause skin sensitization. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Mutagenicity

Genotoxicity in vitro	Product is not considered to be genotoxic According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Genotoxicity in vivo	Product is not considered to be genotoxic According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Carcinogenicity	The product is not considered to be carcinogenic. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Toxicity for reproduction and development

Toxicity to reproduction / fertility

Methane, 1,1'-sulfinylbis-	Reproduction / developmental toxicity screening test - Rat, male and female, Oral Fertility NOAEL Parent: >= 1,000 mg/kg Developmental Toxicity NOAEL F1: >= 1,000 mg/kg OECD Test Guideline 421 Gavage, Unpublished reports, no impairment of fertility has been observed, No effect observed on development
Phosphorothioic triamide, N-butyl-	Fertility study 2 generations - Rat, male, Oral General Toxicity Parent NOAEL: 61 mg/kg Fertility NOAEL F1: 18 mg/kg OECD Test Guideline 416 Unpublished reports, Possible risk of impaired fertility. Fertility study 2 generations - Rat, female, Oral General Toxicity Parent NOAEL: 17 mg/kg Fertility NOAEL F1: 83 mg/kg OECD Test Guideline 416 Unpublished reports, Possible risk of impaired fertility.

Proprietary additive	Reproduction / developmental toxicity screening test - Rat, male and female, Oral General Toxicity Parent NOEL: 300 mg/kg bw/day Fertility NOEL: 100 mg/kg bw/day OECD Test Guideline 421 in feed, no impairment of fertility has been observed, Unpublished reports By analogy Two-generation reproductive toxicity - Rat, male and female, Oral OECD Test Guideline 416 Gavage, no impairment of fertility has been observed, Unpublished reports

Developmental Toxicity/Teratogenicity

Methane, 1,1'-sulfinylbis-	Rabbit, male and female, Oral Teratogenicity NOAEL:1,000mg/kg Method: OECD Test Guideline 414 Gavage, Unpublished reports, no teratogenic effects have been observed, No effect observed on development Rabbit, male and female, Oral General Toxicity Maternal NOAEL: 300 mg/kg Method: OECD Test Guideline 414 Gavage, Unpublished reports, no teratogenic effects have been observed, No effect observed on development Rat, male and female, Oral Teratogenicity NOAEL:1,000mg/kg Method: OECD Test Guideline 414 Gavage, Unpublished reports, no teratogenic effects have been observed, No effect observed on development Rat, male and female, Oral General Toxicity Maternal NOAEL: 1,000 mg/kg Method: OECD Test Guideline 414 Gavage, Unpublished reports, no teratogenic effects have been observed, No effect observed on development
Phosphorothioic triamide, N-butyl-	Rat, female, Oral Test period: 10 Days General Toxicity Maternal NOAEL: 125 mg/kg Teratogenicity NOAEL:>= 500mg/kg Method: OECD Test Guideline 414 Unpublished reports, no embryotoxic or teratogenic effects have been observed, No effect observed on development
Proprietary additive	Pre-natal - Rat, male and female, Dermal General Toxicity Maternal NOAEL: 100 mg/kg bw/day Developmental Toxicity NOAEL F1: 300 mg/kg bw/day Method: OECD Test Guideline 414 no teratogenic effects have been observed, Unpublished reports

STOT

STOT-single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

STOT-repeated exposure	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2 according to GHS criteria. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Methane, 1,1'-sulfinylbis-	Oral 2 y - Dog, male and female LOAEL: 1100 mg/kg Target Organs: Eyes Method: OECD Test Guideline 452 Gavage Published data Chronic exposure Ocular toxicity effects The significance of these findings for humans is not certain. Oral 18 Months - Rat, male and female NOAEL: 3300 mg/kg Method: OECD Test Guideline 452 Gavage Published data Chronic exposure Not considered to cause serious damage to health on repeated exposure Oral 18 Months - Monkey, male and female NOAEL: 2970 mg/kg Method: OECD Test Guideline 452 Gavage Published data Chronic exposure Not considered to cause serious damage to health on repeated exposure Inhalation (vapor) 90 Days - Rat, male and female NOAEC: 2.783 mg/kg Method: OECD Test Guideline 413 Aerosol Unpublished reports Subchronic toxicity Not considered to cause serious damage to health on repeated exposure Dermal 18 Months - Monkey, male and female NOAEL: >= 8910 mg/kg Method: OECD Test Guideline 452 Published data Chronic exposure Not considered to cause serious damage to health on repeated exposure Dermal 90 Days - Humans, male NOAEL: 1000 mg/kg Method: OECD Test Guideline 452 Published data Subchronic toxicity No adverse effect has been observed in toxicity tests by repeated administration
Phosphorothioic triamide, N-butyl-	Oral 90 Days - Rat, male NOAEL: 74 mg/kg bw/day Published data

	Oral 90 Days - Rat, female LOAEL: 17 mg/kg bw/day Published data
	Method: OECD Test Guideline 408 Symptoms: female reproductive effects Unpublished reports effects on the reproductive system females
Proprietary additive	Oral 8 Weeks - Mouse, male and female NOAEL: 590 mg/kg in feed No adverse effect has been observed in toxicity tests by repeated administration Unpublished reports
	Oral 90-day - Rat, male and female NOAEL: 25 mg/kg Target Organs: Liver Method: OECD Test Guideline 408 in feed Unpublished reports
	Oral 90-day - Dog, male and female NOAEL: 0.63 mg/kg Target Organs: Liver Method: OECD Test Guideline 409 in feed Unpublished reports

Neurological effects

Methane, 1,1'-sulfinylbis-	Unpublished reports, Rat, No neurotoxic effects observed.

Experience with human exposure

Experience with human exposure: Inhalation

Phosphorothioic triamide, N-butyl-	Symptoms: Nose bleeding Vomiting Published data

CMR effects

Reproductive toxicity

Phosphorothioic triamide, N-butyl-	Suspected of damaging fertility.

Aspiration toxicity	Not classified for aspiration toxicity according to GHS criteria
	According to the available data on the components, According to the classification criteria for mixtures., internal evaluation

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	The product itself has not been tested. Global ecotoxicity assessment available below.
Acute toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested. Global ecotoxicity assessment available below.
Toxicity to aquatic plants	The product itself has not been tested. Global ecotoxicity assessment available below.
Toxicity to microorganisms	The product itself has not been tested.
Chronic toxicity to fish	The product itself has not been tested. Global ecotoxicity assessment available below.
Chronic toxicity to daphnia and other aquatic invertebrates	The product itself has not been tested. Global ecotoxicity assessment available below.

Sediment compartment

Toxicity to benthic organisms	The product itself has not been tested.

Terrestrial Compartment

Toxicity to soil dwelling organisms	The product itself has not been tested.
Toxicity to terrestrial plants	The product itself has not been tested.
Toxicity to above ground organisms	The product itself has not been tested.

12.2 Persistence and degradability

Abiotic degradation

Stability in water	Conclusion is not possible for a mixture as a whole.
Photodegradation	Conclusion is not possible for a mixture as a whole.

Physical- and photo-chemical elimination

Physico-chemical removability	Conclusion is not possible for a mixture as a whole.

Biodegradation

Biodegradability	As (bio)degradability is not relevant for mixtures, all the components of the mixture were assessed individually (rapid degradability assessment available below).

Degradability assessment

Methane, 1,1'-sulfinylbis-	The product is not considered to be rapidly degradable in the environment
Proprietary additive	The product is considered to be rapidly degradable in the environment

12.3 Bio accumulative potential

Partition coefficient: n-octanol/water

Methane, 1,1'-sulfinylbis-	Not potentially bio accumulable
Phosphorothioic triamide, N-butyl-	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Proprietary additive	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Bioconcentration factor (BCF)	No data available

12.4 Mobility in soil

Adsorption potential (Koc)	Conclusion is not possible for a mixture as a whole.

Known distribution to environmental compartments

Methane, 1,1'-sulfinylbis-	Ultimate destination of the product: Soil Water Predicted distribution to environmental compartments Unpublished reports
Phosphorothioic triamide, N-butyl-	Ultimate destination of the product: Soil
Proprietary additive	Ultimate destination of the product: Water Content: 99.9 % Method: Estimation method Predicted distribution to environmental compartments Unpublished reports

12.5 Results of PBT and vPvB assessment

Methane, 1,1'-sulfinylbis-	This substance is not considered to be persistent, bioaccumulating, and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).
Phosphorothioic triamide, N-butyl-	Not classified as PBT substance. Not classified as vPvB.
Proprietary additive	This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard	No acute environmental hazard identified. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.
Long-term (chronic) aquatic hazard	No chronic environmental hazard identified. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

Prohibition

- Do not discharge directly into the environment.
- Do not dispose of with domestic refuse.
- Dispose of as hazardous waste in compliance with local and national regulations.
- Waste Management options should first consider possible re-use or recycling opportunities. Some provinces have active "Waste Exchange" networks for re-use and recycling of wastes. Contact your local waste management companies to explore available options. All waste management activities must obey local, provincial and federal regulations. Possible disposal methods include the following:
- Can be incinerated, when in compliance with local regulations.

Advice on cleaning and disposal of packaging

Prohibition

- Do NOT dispose of untreated packaging with industrial waste.
- Do not dispose of with domestic refuse.
- Empty remaining contents.
- Clean using steam.
- Clean with the help of detergent. Avoid using any solvent.
- Monitor the residual vapors.
- Dispose of rinse water in accordance with local and national regulations.
- Containers that cannot be cleaned must be treated as waste.
- Dispose of contents/ container to an approved waste disposal plant.
- Dispose of in accordance with local regulations.
- Where possible recycling is preferred to disposal or incineration.
- The recycled material must be completely dry and free of pollutants.

SECTION 14: Transport information

TDG
not regulated

DOT
not regulated

NOM
not regulated

IMDG
not regulated

IATA
not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australian Inventory of Industrial Chemicals	- One or more components not listed on inventory

Japan. CSCL - Inventory of Existing and New Chemical Substances	- One or more components not listed on inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- One or more components not listed on inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- One or more components not listed on inventory
Taiwan Chemical Substance Inventory (TCSI)	- One or more components not listed on inventory
New Zealand. Inventory of Chemical Substances	- One or more components is not listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.

15.2 National Regulations

Canada. CEPA 1999 Significant New Activity (SNAc) List:

- No substances are subject to a Significant New Activity Notification.

Other regulations

- When adding this product as an additive to ammonium nitrate, various regulations relevant to ammonium nitrate may apply to the resultant formulation. These regulations may vary among countries and regions, across different grades of ammonium nitrate.

The relevant competent person(s) are to consult such regulations, relevant to the intended workplace(s), storage facilities, shipping route(s), destination countries / regions and intended uses, wherever they may be.

SECTION 16: Other information

Revision Date:

02/22/2021

NFPA (National Fire Protection Association) - Classification

Health	2 moderate
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	2 moderate
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Key or legend to abbreviations and acronyms used in the safety data sheet

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland

Waterways.

- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals' group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals' group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bio accumulative and Toxic substance.
- vPvB: Very Persistent and Very Bio accumulative.
- SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.