

SECTION 1: Identification

1.1. Identification

Product name : Releaf OS

1.2. Recommended use and restrictions on use

Recommended uses and restrictions : Liquid Fertilizer

1.3. Supplier

ATP Nutrition Ltd.
190 Agri Park Road
Oak Bluff, MB
R4G 0A5
T 204-287-2023 - F 204-287-0027
infocanada@atpnutrition.ca - www.atpnutrition.ca

1.4. Emergency telephone number

Emergency number : CANUTEC: +1-613-996-6666 or *666 (cellular)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin Irrit. 2	H315
Eye Irrit. 2A	H319

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary statements (GHS US) :

P264 - Wash hands, forearms and face thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 - If on skin: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 - Specific treatment (see supplemental first aid instruction on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

Releaf OS

Safety Data Sheet

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Borax (B ₄ Na ₂ O ₇ ·10H ₂ O)	CAS-No.: 1303-96-4	5 – 10
Manganese (II) Chloride Tetrahydrate	CAS-No.: 13446-34-9	1 – 5
Zinc chloride	CAS-No.: 7646-85-7	1 – 5

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
First-aid measures after skin contact	: Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.
First-aid measures after eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
First-aid measures after ingestion	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact	: No known significant effects or critical hazards
Symptoms/effects after eye contact	: Causes serious eye irritation
Symptoms/effects after inhalation	: No known significant effects or critical hazards
Symptoms/effects after ingestion	: No known significant effects or critical hazards

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use suitable extinguishing media for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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Releaf OS

Safety Data Sheet

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

6.1.2. For emergency responders

- Protective equipment : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".
- Emergency procedures : Keep unnecessary and unprotected personnel from entering.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Put on appropriate personal protective equipment (see Section 8).
- Hygiene measures : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Do not store below the following temperature: 10°C (50°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Releaf OS

Safety Data Sheet

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Borax (B₄Na₂O₇·10H₂O) (1303-96-4)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	2 mg/m ³ (inhalable particulate matter)
ACGIH OEL STEL	6 mg/m ³ (inhalable particulate matter)
ACGIH chemical category	Not Classifiable as a Human Carcinogen

USA - NIOSH - Occupational Exposure Limits

NIOSH REL (TWA)	5 mg/m ³
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Manganese (II) Chloride Tetrahydrate (13446-34-9)

No additional information available

Zinc chloride (7646-85-7)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	1 mg/m ³ (fume)
ACGIH OEL STEL	2 mg/m ³ (fume)

USA - OSHA - Occupational Exposure Limits

OSHA PEL (TWA) [1]	1 mg/m ³ (fume)
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USA - IDLH - Occupational Exposure Limits

IDLH	50 mg/m ³ (fume)
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USA - NIOSH - Occupational Exposure Limits

NIOSH REL (TWA)	1 mg/m ³ (fume)
NIOSH REL (STEL)	2 mg/m ³ (fume)

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Releaf OS

Safety Data Sheet

Skin and body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Brown
Odor	: None
Odor threshold	: No data available
pH	: 5 – 7
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 1.32
Solubility	: Soluble in water
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Releaf OS

Safety Data Sheet

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

None.

10.5. Incompatible materials

Oxidizing materials.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Borax (B₄Na₂O₇·10H₂O) (1303-96-4)

LD50 oral rat	3493 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 Inhalation - Rat	> 2 mg/m ³ (Exposure time: 4 h)
ATE US (oral)	3493 mg/kg body weight

Manganese (II) Chloride Tetrahydrate (13446-34-9)

ATE US (oral)	100 mg/kg body weight
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Zinc chloride (7646-85-7)

LD50 oral rat	1100 mg/kg
LC50 Inhalation - Rat	≤ 1975 mg/m ³ (Exposure time: 10 min)
ATE US (oral)	350 mg/kg

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Releaf OS

Safety Data Sheet

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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Zinc chloride (7646-85-7)

BCF - Fish [1]	16000
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA No : Not applicable
UN-No. (TDG) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable

Releaf OS

Safety Data Sheet

Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : Not applicable

TDG

Transport hazard class(es) (TDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (TDG) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

Not applicable

TDG

Not applicable

IMDG

Not applicable

IATA

Not applicable

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Borax (B4Na2O7.10H2O)	1303-96-4	Present	Active	
Manganese (II) Chloride Tetrahydrate	13446-34-9	Not present	-	
Zinc chloride	7646-85-7	Present	Active	

Releaf OS

Safety Data Sheet

Zinc chloride (7646-85-7)

CERCLA RQ

1000 lb

15.2. US State regulations

Component	State or local regulations
Borax (B4Na2O7.10H2O)(1303-96-4)	U.S. - Massachusetts - Right To Know List; U.S. - Minnesota - Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Zinc chloride(7646-85-7)	U.S. - Massachusetts - Right To Know List; U.S. - Minnesota - Hazardous Substance List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Date of Previous Issue: -

Version: 1

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