

SECTION 1 : Identification

Product identifier	BIOX-M
Other means of identification	Registration no. 35199 Pest Control Product Act
Product use	-
Restrictions on use	For the control of sprouting of potatoes in storage
Supplier identifier	Only the identified use is authorised
Resident Canadian Agent	XEDA INTERNATIONAL Société par Actions Simplifiée 1397 Route nationale 7, ZAC LA CRAU 13670 St-Andiol / France Tel : + 33 4 90 90 23 23 Fax : + 33 4 90 90 23 20 Department in charge of SDS: fds@xeda.com
Emergency phone number	Ron W. Kobylnyk 2e - 9851 Second St. Sidney British Columbia V8L 3C7 Canada 250-656-0021
	911 or 1-888-CAN-UTEC (226-8832), 613 996-6666 or *666 by cellular phone

SECTION 2 : Hazard identification

Classification of the end use product

Classification according to Regulation (EC) No. 1272/2008 [CLP]			
Hazard class	Hazard pictogram	Hazard class and category	Hazard statements
Skin sensitisation	GHS07	Skin Sens. 1	H317
Aspiration hazard	GHS08	Asp. Tox. 1	H304

Label elements

Labelling in accordance with Regulation (EC) No. 1272/2008 [CLP]	
GHS pictograms	
Signal word	Danger
Hazard statements	H304 : May be fatal if swallowed and enters airways. H317 : May cause an allergic skin reaction.
Precautionary statements	P102 : Keep out of reach of children. P261 : Avoid breathing vapours or fog. P280 : Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 : IF ON SKIN : Wash with plenty of water for at least 15 minutes. P333 + P313 : If skin irritation or rash occurs: Get medical advice/attention P301 + P310 : IF SWALLOWED: Immediately call a POISON CENTER or doctor. P331 : Do NOT induce vomiting. P362 + P364 : Take off contaminated clothing and wash it before reuse.

	P501 : Dispose of contents/container in accordance with local / regional or national regulations.
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Other hazards

No further information available.

SECTION 3 : Composition/information on ingredients

Chemical name	CAS number	CE number	%	REACH registration number	Classification according to regulation (EC) n° 1272/2008 [CLP]	SCL, M-factor, ETA
Mentha spicata, extract (spearmint oil)	8008-79-5	283-656-2	100	N/A, substance considered as being registered (Regulation 1907/2006 Title II, Chapter 2, Article 15)	Skin Sen. 1, H317 Asp. Tox. 1, H304	-

SECTION 4 : First-aid measures

Description of necessary first-aid measures

General notes : Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed : Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled : Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

If in eyes : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Self-protection of the person providing first aid : no special precautions required.

Most important signs and symptoms/effects, acute and delayed

After contact with the skin: may cause irritation or a rash.

Indication of immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5 : Fire-fighting measures

Extinguishing media

Suitable extinguishing media :

Powder extinguishers (dry multi-purpose ABC and BC powder)

CO₂ extinguisher

Water extinguisher with additive

Foam
Sand
Fire blanket

Unsuitable extinguishing media :
Water spray extinguishers without additives
Water hose.

Specific hazards arising from the product

In the event of a fire dangerous decomposition products may form : carbon monoxide or carbon dioxide.

Special protective actions for fire-fighters

Wear special protective equipment for fire-fighting personnel.
Avoid release to the environment, collect contaminated fire-fighting water, do not discharge into drains.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wear appropriate protective equipment (see section 8) to prevent contamination of skin, the eyes and personal clothing.
Emergency procedures :

1. Alert people in the immediate area
2. Stop the spill
3. Close off the area with tape
4. Don appropriate protective equipment (see section 8)
5. Avoid breathing the vapours
6. Contain and cover the spill using suitable absorbent pellets
7. Ventilate
8. Collect the absorbent pellets and dispose of them as hazardous waste (see section 13)
9. Clean the contaminated area thoroughly

For emergency responders

no further information available.

Environmental precautions

Prevent release to the environment. Do not discharge into drains/surface water/groundwater.

Methods and materials for containment and cleaning up

Installation of spill containment, sewer covers

Contain and collect spillage using absorbent materials, for example, sand, earth, vermiculite, diatomaceous earth in containers. Dispose of the contents/container at a hazardous waste collection point in accordance with national regulations.

SECTION 7 : Handling and storage

Precautions for safe handling

Pest control product reserved for professional use only: the personnel using the product must be up to date with the mandatory training in the use of the product.

Wear appropriate protective equipment during application (see section 8).

Prohibit unauthorised persons from entering the premises.

Wait 48 hours after the treatment before entering the treated room, if entry is required before this time has expired, wear protective breathing apparatus.

Do not clean application equipment near surface water. Avoid contamination through water evacuation systems from farmyards or roads

General advice on occupational hygiene: Keep away from food and drink, including animal feed. Do not eat, drink or smoke in the work areas. Wash your hands after each use. Remove contaminated clothing and protective equipment before entering a catering area, break areas, offices, etc. Do not leave the premises wearing work clothes or personal protective equipment. Store work clothing separately from personal clothing. Change work clothing frequently and whenever it has been soiled.

Conditions for safe storage, including any incompatibilities

Store the product in the original packaging.

The storage location must:

- be reserved for the storage of pest control products and disinfectants,
- be aired or well-ventilated
- be well-lit
- be locked,
- not contain a permanent workstation,
- be at a distance from food, children and pets.

SECTION 8 : Exposure controls/personal protection

Control parameters

No known specific occupational exposure limits.

Appropriate engineering controls

The use of suitable and maintained equipment and the use of collective protection are the first preventive measures against professional risks, before personal protection is implemented.

The wearing of specific work clothing or PPE must be combined with hygiene (e.g. washing hands, shower after treatment) and strict behaviour (e.g. dressing/undressing procedure).

Cleaning and storage methods for re-usable protective clothing and PPE must comply with their instructions for use.

For loading, application, clean-up and repair, wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

Wait 48 hours after treatment before entering the treated room.

DO NOT enter the treatment area until it has been completely ventilated, with either 10 air exchanges, or 2 hrs of ventilation using fans or other mechanical ventilation systems, or 4 hrs of ventilation using vents, windows, or other passive ventilation. If visible aerosol remains after these periods, do not enter until the aerosol has settled.

If entry into treated areas is required before complete ventilation has taken place, workers must wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes and a respirator with a NIOSH/MSHA approved organic vapour removing cartridge with a pre-filter approved for pesticides.

Individual protection measures

Eye/face protection : Use a face shield. Standard EN 166

Skin protection : Category III type 5/6 work overalls or protective clothing in accordance with the NF ISO 27 065/A1 standard for workers handling treated tubers.

Hand protection : Use approved protective gloves compliant with the EN 374 standard of the nitrile or neoprene type. Recommended thickness approx. > 0.4 mm and piercing time > 480 min. Follow the protective glove manufacturer's instructions and information regarding their use, storage, care and replacement.

Respiratory protection : Wear respirator with a NIOSH/MSHA approved organic vapour removing cartridge with a pre-filter approved for pesticides

Instructions for the use of PPE :

Before getting equipped, it is compulsory to check that the PPE is in good condition and to check the expiry dates.

Before treating : Don overalls, gloves, the respiratory protection apparatus. Cover the gloves with the overall.

After treatment :

- Remove the protective apparatus, remove the filter(s) and close each one with its lid, place the filters in hermetic packaging. Clean the breathing apparatus, check the battery charge level.
- Wash the gloves, remove them avoiding contact with the outside of the glove by turning them inside out, and store (dry) or discard them if used
- Remove glasses, store or discard if used
- Remove the overalls and discard them
- Wash your hands and take a shower

Disposal:

Place disposable or damaged personal protection equipment in a specific container for disposal at an approved hazardous materials processing facility.

SECTION 9 : Physical and chemical properties

Physical state : liquid

Colour : colourless to yellowish

Odeur : spearmint, pleasant, fresh and soft

Odour threshold : no data available

pH : not applicable, product insoluble in water

Melting point/freezing point : no data available

Boiling point or initial boiling point and boiling range : 230 - 231°C (100% L-carvone)

Flash point	: $80 \pm 10^\circ\text{C}$ (EEC A9 method)
Evaporation rate	: no data available
Flammability	: no data available
Upper and lower flammability / explosive limits	: no data available
Vapour pressure	: no data available
Vapour density	: no data available
Relative density or specific gravity	: 0.94 ± 0.01 (EEC A3 method)
Solubility	: insoluble in water, soluble in organic solvents
Partition coefficient: n-octanol/water (K_{ow})	: 2.7
Auto-ignition temperature	: $301 \pm 5^\circ\text{C}$ (EC A15 method)
Decomposition temperature:	: no data available
Viscosity	: 3 mm ² /s (OCDE 114 method)

SECTION 10 : Stability and reactivity

Reactivity

No further information available.

Chemical stability

No dangerous reaction when handled and stored according to instructions.

Possibility of hazardous reactions

No dangerous reactions, if storage and handling instructions are followed.

Conditions to avoid

Storage conditions: see section 7.2.
The product must be used as instructed.

Incompatible materials

No further information available.

Hazardous decomposition products

Does not decompose when used as intended.
No known hazardous decomposition products.

SECTION 11 : Toxicological information

Information on the likely routes of exposure

Through skin contact ; by aspiration.

Acute toxicity:

LD50 (rat) oral > 2000 mg/kg, no mortality was observed, (OECD 423)
LD50 (rat) dermal > 2000 mg/kg, no mortality was observed, (OECD 402)
LC50 (rat) inhalation > 5.43 mg/L (4h), no mortality was observed, (OECD 403)

Skin corrosion/skin irritation:

Non-irritating (OECD 404, rabbit)

Severe eye lesions/ Eye irritation:

Non-irritating (OECD 405, rabbit)

Skin or respiratory sensitisation:

Sensitising (OECD 429, mouse)

Germ cell mutagenicity:

Not classified

Carcinogenicity:

Not classified

Reprotoxicity:

Not classified

Specific target organ toxicity - single exposure:

Not classified

Specific target organ toxicity - repeated exposure:

Not classified

Inhalation hazard:

Classified. May be fatal if swallowed and if it enters the respiratory tract. Classification based on the physical and chemical properties of the product.

Interactive effects:

No data available

Other information

Endocrine disrupting properties:

No data available

SECTION 12 : Ecological information

Environmental information

Based on the results of its assessment, this substance is not classified.

Ecotoxicity

Acute (short-term) toxicity :

Fish:

Oncorhynchus mykiss LC₅₀ (96h) = 14.90 mg/L (OECD 203)

Crustaceans:

Daphnia magna EC₅₀ (48h) = 10.6 mg/L (OECD 202)

Algae/aquatic plants:

Lemna sp. EC₅₀ = 25.3 mg/L (OECD 221, March 2006)

Fresh water algae, (72h) ErC₅₀ = 42.8 mg/L, 72h EyC₅₀ = 26.3 mg/L (OECD 201)

Long-term toxicity :

no data available

Persistence and degradability

The product is easily biodegradable (83% elimination in 28 days) (closed system test) (CEE C4.e)

Bio-accumulative potential

Distribution coefficient n-octanol/water (Log Kow) = 2.7.

Bioconcentration factor BCF: no data available.

Log Kow ≤ 4: Non-bioaccumulative substance.

Mobility in soil

Organic carbon distribution coefficient (Koc) = 98 mL/g (OECD106).

Conclusion: Substance considered mobile (Koc < 100).

Other adverse effects

Based on the results of its assessment, this substance is not considered to be a persistent, bio-accumulative and toxic PBT substance.

Based on the results of its assessment, this substance is not considered to be a highly persistent and highly bio-accumulative vPvB substance.

SECTION 13 : Disposal considerations

Disposal methods

Dispose of this product and its container at a hazardous waste collection point.

SECTION 14 : Transport information

Goods not classified as dangerous for transport.

United Nations (UN) Number

UN Proper Shipping Name

Transport hazard class(es)

Packing group

Environmental hazards

Special precautions for user

Transport in bulk

SECTION 15 : Regulatory information

Safety, health and environmental regulations specific for the product

Canada

This substance is listed on the Domestic Substance List (DSL)

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

POTENTIAL SKIN SENSITIZER

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

SECTION 16 : Other information

Lists of relevant H statements:

Skin Sens. 1	Sensitization skin, hazard category 1
Asp. Tox. 1	Aspiration hazard, hazard category 1
H304	May be fatal if swallowed and enters airways
H317	May cause an allergic skin reaction

List of acronyms

ADR	European agreement concerning the international transport of hazardous goods by road
ADN	European agreement on the international transport of goods by inland waterway
CLP	Classification labelling packaging [Regulation on classification, labelling and packaging; Regulation (EC) No.1272/2008]
CAS	Chemical Abstract Service number
CE number	EINECS and ELINCS number, Inventory of existing chemicals on the EU market and European list of notified chemicals
IATA	International Air Transport Association
ICAO	Technical instructions for the safe transport of hazardous goods by air
IMDG	International Maritime Dangerous Goods
LC ₅₀	Lethal concentration for 50% of the test population (median lethal concentration)
LD ₅₀	Median lethal dose for 50% of the test population (median lethal dose)
ATE	Acute toxicity estimate
SCL	Specific concentration limit
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No.1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

References : REACH Regulation (EC) No. 1907/2006

Regulation (EC) No. 1272/2008 [CLP]

Guidance for Preparing Safety Data Sheets According to the Globally Harmonized System of Classification and Labelling of Chemicals for Pest Control Products in Canada (30/01/2018)

The information on this sheet supplements the technical instructions for use but does not replace them. The information it contains is based on our knowledge of the product concerned at the indicated date. Users' attention is also drawn to the possible risks involved when a product is used for purposes other than those for which it is designed. The information provided complies with applicable EU regulations. It does not exempt the user from knowing and applying all applicable national regulations.