

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : BioBrake™
Product group : Trade product

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

BioChem Systems, Inc.
480 Wildwood Forest Drive
Suite 400
Spring, TX 77380
1 (800) 777-7870

1.4. Emergency telephone number

Emergency number : (800) 633-8253

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Flammable aerosols, Category 1	H222	Extremely flammable aerosol.
Aerosols, Category 1	H229	Pressurized container may burst if heated.
Serious eye damage/eye irritation, Category 2A	H319	Causes serious eye irritation.
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness.

2.2. GHS Label elements, including precautionary statements

GHS CA labelling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Danger

Hazard statements (GHS CA) :

H222 - Extremely flammable aerosol.
H229 - Pressurized container: may burst if heated
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.

Precautionary statements (GHS CA) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Do not pierce or burn, even after use.
P261 - Avoid breathing mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, chemical goggles, & face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P331 - Do NOT induce vomiting.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Acetone	CAS-No.: 67-64-1	30 – 60
Naphtha, petroleum, hydrotreated heavy	CAS-No.: 64742-48-9	10- 30
Propane	CAS-No.: 74-98-6	10- 30
Butane	CAS-No.: 106-97-8	10- 30
Dipropylene glycol monomethyl ether	CAS-No.: 34590-94-8	5 – 10

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention. If breathing is difficult, supply oxygen. If breathing has stopped, give artificial respiration.
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.
First-aid measures after eye contact	: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing if pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.
First-aid measures after ingestion	: IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention immediately.
First-aid measures general	: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.

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

Symptoms/effects	: May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May be fatal if swallowed and enters airways.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment	: No additional information available.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Foam. Carbon dioxide. Dry chemical. Water fog.
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5.2. Unsuitable extinguishing media

Unsuitable extinguishing media	: None known.
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5.3. Specific hazards arising from the hazardous product

Fire hazard	: Extremely flammable aerosol.
Explosion hazard	: Heating may cause an explosion.
Reactivity in case of fire	: None known.
Hazardous decomposition products in case of fire	: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon oxides and other organic compounds will be evolved when this material undergoes thermal degradation.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment. Prevent human exposure to fire, fumes, smoke and products of combustion.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus.
Precautionary measures fire	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection. Use special care to avoid static electric charges. Avoid breathing fumes or vapours. No flames, no sparks. Eliminate all sources of ignition. Vapor may cause flash fires. Vapors are heavier than air and can travel long distances to ignition sources.
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6.2. Methods and materials for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Eliminate ignition sources. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. This material and its container must be disposed of in a safe way, and as per local legislation. Notify authorities if product enters sewers or public waters.

6.3. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing vapours, mist. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue and can be hazardous.
 Storage conditions : Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetone (67-64-1)

Canada (Alberta) - Occupational Exposure Limits

Local name	Acetone
OEL TWA	1200 mg/m ³
OEL TWA [ppm]	500 ppm
OEL STEL	1800 mg/m ³
OEL STEL [ppm]	750 ppm
Notations and remarks	eye irr; CNS impair; BEI
Regulatory reference	Alberta Regulation 191/2021

Canada (Quebec) - Occupational Exposure Limits

VECD (OEL STEL)	2380 mg/m ³
VECD (OEL STEL) [ppm]	1000 ppm
VEMP (OEL TWA)	1190 mg/m ³
VEMP (OEL TWA) [ppm]	500 ppm

Canada (British Columbia) - Occupational Exposure Limits

Local name	Acetone
OEL TWA [ppm]	250 ppm
OEL STEL [ppm]	500 ppm
Notations and remarks	eye irr; CNS impair; BEI
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)

Canada (Manitoba) - Occupational Exposure Limits

Local name	Acetone
OEL TWA [ppm]	250 ppm
OEL STEL [ppm]	500 ppm
Notations and remarks	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2022

Canada (New Brunswick) - Occupational Exposure Limits

OEL TWA	1188 mg/m ³
OEL TWA [ppm]	250 ppm
OEL STEL	1782 mg/m ³
OEL STEL [ppm]	500 ppm
Notations and remarks	eye irr; CNS impair; BEI

Canada (Newfoundland and Labrador) - Occupational Exposure Limits

Local name	Acetone
OEL TWA [ppm]	250 ppm
OEL STEL [ppm]	500 ppm
Notations and remarks	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2022

Canada (Nova Scotia) - Occupational Exposure Limits

Local name	Acetone
OEL TWA [ppm]	250 ppm
OEL STEL [ppm]	500 ppm
Notations and remarks	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2022

Canada (Nunavut) - Occupational Exposure Limits

Local name	Acetone
OEL TWA [ppm]	500 ppm

Acetone (67-64-1)	
OEL STEL [ppm]	750 ppm
Notations and remarks	eye irr; CNS impair; BEI
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA [ppm]	500 ppm
OEL STEL [ppm]	750 ppm
Notations and remarks	eye irr; CNS impair; BEI
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-013-2020)
Canada (Ontario) - Occupational Exposure Limits	
OEL TWA [ppm]	250 ppm
OEL STEL [ppm]	500 ppm
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Acetone
OEL TWA [ppm]	250 ppm
OEL STEL [ppm]	500 ppm
Notations and remarks	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2022
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Acetone
OEL TWA [ppm]	500 ppm
OEL STEL [ppm]	750 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10
Canada (Yukon) - Occupational Exposure Limits	
OEL TWA	2400 mg/m ³
OEL TWA [ppm]	1000 ppm
OEL STEL	3000 mg/m ³
OEL STEL [ppm]	1250 ppm
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetone
ACGIH OEL TWA [ppm]	500 ppm
ACGIH OEL STEL [ppm]	750 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2022
USA - ACGIH - Biological Exposure Indices	
Local name	ACETONE
BEI	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift (nonspecific)
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Acetone
OSHA PEL TWA [1]	2400 mg/m ³
OSHA PEL TWA [2]	1000 ppm
OSHA PEL STEL [1]	2400 mg/m ³ (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors)
OSHA PEL STEL [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Dipropylene glycol monomethyl ether (34590-94-8)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	(2-Methoxymethylethoxy) propanol (Dipropylene glycol methyl ether, DPGME)
OEL TWA	606 mg/m ³
OEL TWA [ppm]	100 ppm
OEL STEL	909 mg/m ³
OEL STEL [ppm]	150 ppm
Notations and remarks	Substance may be readily absorbed through intact skin.
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
VECD (OEL STEL)	909 mg/m ³
VECD (OEL STEL) [ppm]	150 ppm
VEMP (OEL TWA)	606 mg/m ³
VEMP (OEL TWA) [ppm]	100 ppm
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether [bis-(2-Methoxypropyl) ether (DPGME)]
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	Skin
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)

Dipropylene glycol monomethyl ether (34590-94-8)	
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	TLV® Basis: Liver & CNS eff
Regulatory reference	ACGIH 2022
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA	606 mg/m ³
OEL TWA [ppm]	100 ppm
OEL STEL	909 mg/m ³
OEL STEL [ppm]	150 ppm
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	TLV® Basis: Liver & CNS eff
Regulatory reference	ACGIH 2022
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	TLV® Basis: Liver & CNS eff
Regulatory reference	ACGIH 2022
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	Skin
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	Skin
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-013-2020)
Canada (Ontario) - Occupational Exposure Limits	
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	TLV® Basis: Liver & CNS eff
Regulatory reference	ACGIH 2022
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
OEL TWA [ppm]	100 ppm
OEL STEL [ppm]	150 ppm
Notations and remarks	Skin
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10
USA - ACGIH - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether (DPGME)
ACGIH OEL TWA [ppm]	100 ppm
ACGIH OEL STEL [ppm]	150 ppm
Remark (ACGIH)	TLV® Basis: Liver & CNS eff
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Dipropylene glycol methyl ether
OSHA PEL TWA [1]	600 mg/m ³
OSHA PEL TWA [2]	100 ppm
OSHA PEL STEL [1]	900 mg/m ³ Vacated
OSHA PEL STEL [2]	150 ppm Vacated
Limit value category (OSHA)	prevent or reduce skin absorption
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Propane (74-98-6)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Propane
OEL TWA [ppm]	1000 ppm

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Propane (74-98-6)	
Regulatory reference	Alberta Regulation 87/2009 (Alberta Regulation 150/2020)
Canada (Quebec) - Occupational Exposure Limits	
VEMP (OEL TWA)	1800 mg/m ³
VEMP (OEL TWA) [ppm]	1000 ppm
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Propane
Notations and remarks	Simple asphyxiant; EX (Substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Notations and remarks	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Notations and remarks	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH
Canada (Nova Scotia) - Occupational Exposure Limits	
Notations and remarks	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA [ppm]	1000 ppm
OEL STEL [ppm]	1250 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA [ppm]	1000 ppm
OEL STEL [ppm]	1250 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-013-2020)
Canada (Prince Edward Island) - Occupational Exposure Limits	
Notations and remarks	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA [ppm]	1000 ppm
OEL STEL [ppm]	1250 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 1996. Chapter O-1.1 Reg 1
USA - ACGIH - Occupational Exposure Limits	
Local name	Propane
ACGIH OEL TWA [ppm]	Listed under aliphatic hydrocarbon gases: Alkane
Remark (ACGIH)	TLV® Basis: Simple Asphyxiant
ACGIH chemical category	Simple asphyxiant See Appendix F: Minimal Oxygen Content
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Propane
OSHA PEL TWA [1]	1800 mg/m ³
OSHA PEL TWA [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Butane (106-97-8)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Butane
OEL TWA [ppm]	1000 ppm
Regulatory reference	Alberta Regulation 87/2009 (Alberta Regulation 150/2020)
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Butane, all isomers: n-butane
OEL STEL [ppm]	1000 ppm
Notations and remarks	EX (Substance is a flammable asphyxiant or excursions above the exposure limit could approach 10% of the lower explosive limit)
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
OEL STEL [ppm]	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL STEL [ppm]	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL STEL [ppm]	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH

Butane (106-97-8)	
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA [ppm]	1000 ppm
OEL STEL [ppm]	1250 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA [ppm]	1000 ppm
OEL STEL [ppm]	1250 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-013-2020)
Canada (Ontario) - Occupational Exposure Limits	
OEL STEL [ppm]	1000 ppm (explosion hazard (Butane, all isomers))
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL STEL [ppm]	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV@ Basis: CNS impair
Regulatory reference	ACGIH
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA [ppm]	1000 ppm
OEL STEL [ppm]	1250 ppm
Notations and remarks	See Aliphatic hydrocarbon
Regulatory reference	The Occupational Health and Safety Regulations, 1996. Chapter O-1.1 Reg 1
USA - ACGIH - Occupational Exposure Limits	
Local name	Butane
ACGIH OEL STEL [ppm]	1000 ppm
Remark (ACGIH)	TLV@ Basis: CNS impair
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	1900 mg/m ³
OSHA PEL TWA [2]	800 ppm
Naphtha, petroleum, hydrotreated heavy (64742-48-9)	
USA - OSHA - Occupational Exposure Limits	
Remark (OSHA)	OELs not established
USA - ACGIH - Occupational Exposure Limits	
Remark (ACGIH)	OELs not established
Canada (all provinces) - Occupational Exposure Limits	
Remark	OELs not established

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Protective goggles. Protective clothing. Insufficient ventilation: wear respiratory protection.

Hand protection:

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

Eye protection:

Wear eye protection, including chemical splash goggles and a face shield when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection:

Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection:

In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with gas filter (type A2). Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Aerosol/Liquid
 Appearance : Liquid Mist

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Colour	: Clear
Odour	: Solvent
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=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	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	: No dangerous reactions known under normal conditions of use.
Chemical stability	: Stable under recommended handling and storage conditions (see section 7).
Possibility of hazardous reactions	: None known.
Conditions to avoid	: No flames, no sparks. Eliminate all sources of ignition. Elevated temperature. Prevent vapour accumulation.
Incompatible materials	: Strong oxidizing agents, reducing agents.
Hazardous decomposition products	: Carbon oxides (CO, CO ₂). Toxic fumes.
Hardening time:	: No additional information available

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

Acetone (67-64-1)

LD50 oral rat	5800 mg/kg
LD50 dermal rat	> 15700 mg/kg
LD50 dermal rabbit	> 15700 mg/kg
LC50 Inhalation - Rat	50100 mg/m ³ 8 h
LC50 Inhalation - Rat (Vapours)	76 mg/l Source: ECHA
ATE CA (vapours)	50.1 mg/l/4h
ATE CA (dust,mist)	50.1 mg/l/4h

Dipropylene glycol monomethyl ether (34590-94-8)

LD50 oral rat	5230 mg/kg
LD50 dermal rat	> 19020 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	9500 mg/kg
LC50 Inhalation - Rat	> 3000 mg/m ³ Source: ECHA

Propane (74-98-6)

LC50 Inhalation - Rat	658 mg/l/4h
LC50 Inhalation - Rat [ppm]	800000 ppm Source: ECHA
ATE CA (vapours)	658 mg/l/4h
ATE CA (dust,mist)	658 mg/l/4h

Butane (106-97-8)

LC50 Inhalation - Rat	658 g/m ³ 4 h; (Source: NLM_CIP)
LC50 Inhalation - Rat [ppm]	> 800000 ppm Source: ECHA
ATE CA (vapours)	658 mg/l/4h
ATE CA (dust,mist)	658 mg/l/4h

Naphtha, petroleum, hydrotreated heavy (64742-48-9)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 Inhalation - Rat	> 8500 mg/m ³ (Exposure time: 4 h)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified

Dipropylene glycol monomethyl ether (34590-94-8)

NOAEL (oral, rat, 90 days)	: 1000 mg/kg bodyweight Animal: rat, Guideline: other:
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Aspiration hazard	: May be fatal if swallowed and enters airways.
Symptoms/effects	: May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: May be fatal if swallowed and enters airways.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

BioBrake™

Persistence and degradability	: No information available.
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12.3. Bioaccumulative potential

BioBrake™

Bioaccumulative potential	: No information available.
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12.4. Mobility in soil

BioBrake™

Ecology - soil	: No information available.
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

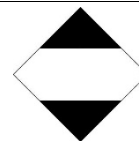
Waste treatment methods	: Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. No discharges to surface waters are allowed without authorization under the Wastewater Systems Effluent Regulations. Follow all national, provincial and local requirements for wastewater discharge.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment. Container under pressure. Do not drill or burn even after use.

SECTION 14: Transport information

Department of Transportation (DOT) / Transportation Canada (TDG)

In accordance with DOT & TDG

Transport document description	: UN1950 Aerosols (Limited quantity), 2.1
UN-No.	: UN1950
Proper Shipping Name	: Aerosols Limited quantity
Class	: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
Hazard labels	: LTD QTY - Limited quantity
TDG Note	: For products with an inner packaging < 1.0 L, this component may be shipped as a Limited Quantity as per TDGSection 1.17.
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Special Provisions (49 CFR 172.102)	: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Packaging Non Bulk (49 CFR 173.xxx)	: None
DOT Packaging Bulk (49 CFR 173.xxx)	: None
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 25 - Protected from sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials
Emergency Response Guide (ERG) Number	: 126



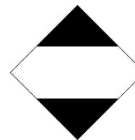
Safety Data Sheet

Prepared according to Canadian Hazardous Products Regulations (SOR/2015-17) (WHMIS 2015)

Other information : No supplementary information available.

Transport by sea (IMDG)

Transport document description (IMDG)	: UN 1950 AEROSOLS (Limited quantity), 2.1
UN-No. (IMDG)	: 1950
Proper Shipping Name (IMDG)	: AEROSOLS
Class (IMDG)	: 2 - Gases
Danger labels (IMDG)	:
Special provisions (IMDG)	: 63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	: SP277
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P207, LP02
Special packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	: S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	: None

**Air transport (IATA)**

Transport document description (IATA)	: UN 1950 Aerosols (limited quantity), 2.1
UN-No. (IATA)	: 1950
Proper Shipping Name (IATA)	: Aerosols, flammable
Class (IATA)	: 2 - Gases
Danger labels (IATA)	:
PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provisions (IATA)	: A145, A167, A802
ERG code (IATA)	: 10L

**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. National regulations****BioBrake™**

All chemical substances in this product are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or are exempt

15.2. International regulations**BioBrake™**

All chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb. 2019, as amended Feb. 2021, or are otherwise exempt or regulated by other agencies such as FDA or FIFRA.

SECTION 16: Other information

Issue date : 03 November 2023

Other information : Revised by: Regulatory & Compliance

Safety Data Sheet (SDS), Canada

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.