Natural Gas (gaseous state)

SECTION 1 : IDENTIFICATION

Product identifier : Natural Gas (gaseous state)

Product identification code : N/A

Other means of identification : Natural Gas, Gaseous Natural Gas, GNG

Recommended use : Fuel or fuel supply for various processes
Mixture of petroleum hydrocarbons

Restrictions on use : Not available

Supplier :
Énergir
1717, rue du Havre
Montréal (Québec) Canada H2K 2X3
Tél. : 514 598 3339

Urgency : 1 855 598 8111

Emergency phone number : *URGENCY* 1 855 598 8111 or 911 24 h / 7 days

SECTION 2 : HAZARD IDENTIFICATION

Classification of the mixture

Hazard class	*Category*	*H Code*
Flammable gas	1A	H220
Gas under pressure	Comprimed gas	H280
Simple Asphyxiant	1	

GHS Label Elements

Signal Word

DANGER

Hazard Symbol(s)

Hazard Statement(s)

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

Precautionary Statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response

P377 Leaking gas fire – do not extinguish unless leak can be stopped safely.

P381 Eliminate all ignition sources if safe to do so.

Storage

P403 Store in a well-ventilated area.

Disposal

N.A.

Other hazards which do not result in classification

Simple asphyxiant: Can displace oxygen and cause suffocation quickly.

SECTION 3 : COMPOSITION / INFORMATIONS ON INGREDIENTS

This product contains the following hazardous ingredients:

# CAS	Chemical Name	Concentration %	Synonym(s)	Chemical Formula
74-82-8	Methane	95-96		CH_4
74-84-0	Ethane	1,7		C_2H_6
7727-37-9	Nitrogen	1,9		N_2
124-38-9	Carbon dioxide	0,7		CO_2
75-66-1	Methyl-2-propanethiol-2	< 1	Mercaptan, odoriferous agent	$C_4H_{10}S$

Other ingredients may be included in the composition of the mixture. Ingredients excluded from the previous table are not classified as hazardous under the GHS.

SECTION 4 : FIRST-AID MEASURES

Description of necessary first-aid measures

Instructions for First Aid Attendants

For any situation where a hazardous chemical is involved, before intervening:

- Determine the product(s) concerned.
- Identify the type of contact (inhalation, ingestion, direct contact with skin or eyes).
- Always confirm that the premises are safe.
- Ensure that the rescued person is decontaminated and/or wear personal protective equipment such as gloves and a mask.

Remain alert to the signs or symptoms that the rescued person presents during the intervention. The clinical manifestations of intoxication are often very variable depending on the characteristics of the product, the person and the type of contact.

If the rescued person is not alert or awake, protect the cervical spine with your hand before stimulating the awakening of that person to avoid sudden movement of the head and spine. Never give anything by mouth to a person with altered state of consciousness.

If the rescued person is unconscious, alert the pre-hospital emergency services immediately and place the person in a safe lateral position, except in the presence of trauma, in which case the person must be left in the position where they were found. Ensure proper room ventilation and cover person if possible.

In case of cardiorespiratory arrest, apply the CPR sequence immediately. DO NOT USE THE MOUTH-TO-MOUTH METHOD: Assist ventilation with a bag-mask, if possible, or use a pocket mask with an appropriate one-way valve. Avoid inhaling exhaled air from rescued person.

Inform pre-hospital emergency services upon arrival and provide this SDS.

In case of inhalation

Bring the person outside or in a well-ventilated area to breathe fresh air and loosen clothing.

Promote the comfort position (except for head, neck or back trauma), lengthen the person or have him or her sit down, asking him or her to lower the head to his or her knees.

In case of eye contact

The rescuer should avoid rubbing or applying pressure to the eyes.

If the person wears contact lenses (contact lenses), ask them to remove them when possible.

Never remove a foreign object lodged in or on the eye: any attempt of this nature may aggravate the injury until the loss of the eye.

Rinse eyes thoroughly for at least 15 minutes by turning the head to the side of the affected eye so as not to contaminate the other eye during rinsing.

Have the rescued person turn their eye constantly and keep their eyelids apart with their fingers to thoroughly rinse the entire surface of the eye.

Sterile eye pads and an eye cover with elastic band can be used to make the dressing, if available. When it is not possible to close the eye, the dressing should be moistened (NaCl or sterile water). Any dressing applied to an eye should be non-concompressive.

In case of skin contact N/A

In case of ingestion N/A

Important symptoms and effects See *Section 11: Toxicological information* for more details.

SIMPLE ASPHYXIANT: a physiologically inert gas that exerts its action by displacing oxygen from the air and which can have the consequence of lowering the percentage of oxygen by volume below 19.5% is necessary to maintain blood oxygen saturation.

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

Medical monitoring Consult a doctor if irritation, blisters, discomfort or symptoms occur.

Show this SDS to the health professional, in case of medical consultation.

Treat according to the symptoms and reactions of the patient.

Occupational poisoning is part of the list of diseases, infections and intoxications reportable under the *Public Health Act (R.S.Q., c. S-2.2).*

Antidote(s) No data available on the antidotes to be administered in case of intoxication to this product.

Contraindication(s) No data available on the applicable contraindications.

Other information The Quebec Poison Control Centre (1-800-463-5060) can guide the first aid attendant or rescuer in the precautions to be taken and first aid to be given depending on the type of intoxication.

Before calling, collect as much information as possible on:

- The product in question.
- The route of absorption.
- The amount absorbed and the time elapsed since the event.
- The person's condition (signs and symptoms), age and approximate weight.
- The circumstances of the event (accidental or voluntary).
- First aid efforts undertaken.

SECTION 5 : FIRE-FIGHTING MEASURES

Suitable extinguishing media

☑ : Suitable
⊘ : Unsuitable

☑ Dry chemical powder ⊘ Alcohol-resistant foam ⊘ Carbon dioxide (CO_2)

⊘ Water Other : Not available

Specific hazards arising from the product Extremely flammable gases and vapours.

The vapours may form a flammable mixture with air, which, in case of ignition, may release an explosive force if in an enclosed space.

Risk of RPT (Rapid Phase Transition): the significant difference in temperature between the LNG and a hotter liquid may cause the "almost instantaneous" vaporization of the LNG. The sudden increase in total volume occupied by the LNG may generate a "cold explosion" shock wave (sudden generation of overpressure but without combustion).

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO_2), fumes.

Special protective actions for fire-fighters Wear a supplied-air respirator near the leak to avoid any risk of asphyxiation.
Do not try to extinguish the fire if the gas leak cannot be stopped. Intervene at a distance, approaching downwind, if necessary. If needed, use a combustible gas detector (explosimeter).

Establish a security perimeter.
In case of fire, and if it can be done safely, close the gas inlet valve.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Actions to be taken in the event of an accidental spill or overflow

For non-emergency personnel

Suitable Protective Equipments

Fireproof clothing may be worn, depending on the nature of the work and the risk of fire.

See *Section 8: Exposure Controls / Personal protection* for more details.

Emergency Procedures

- Activate the Spill Emergency Plan.
- Evacuate non-essential personnel and establish a security perimeter.
- Evacuate the danger zone according to emergency procedures.
- Stop the spill or leak if it is safe to do so.
- Turn off or remove all sources of heat or potential ignition. Do not smoke.
- Avoid exposing the product or containers to abrasion, static electricity or friction.
- Avoid exposing products or containers to impacts, shocks or vibrations.
- Never respond alone during an important intervention.
- Ensure adequate ventilation.
- Consult with specialized stakeholders.

For emergency responders

Suitable Protective Equipments

Fireproof clothing may be worn, depending on the nature of the work and the risk of fire.

See *Section 8: Exposure Controls / Personal protection* for more details.

Use only in well-ventilated areas. See also OSHA regulations for handling this product, including *29 CFR 1910.110 Storage and handling of liquefied petroleum gases*.

Environmental Precautions

Let the gas escape into the atmosphere. Check for combustible gases in sewers and underground structures and buildings. For significant quantities, consult the regional office of the environmental authority with jurisdiction. Consider weather conditions (wind speed and direction, temperature, humidity). Stay upstream, and if possible, evaluate the direction of movement of the product.

Methods and materials for containment and cleaning up

Appropriate containment techniques

N/A

Appropriate neutralization, decontamination and cleaning techniques

N/A

Equipment required for containment and clean up

The vapor cloud may be white, but the color dissipates, and the risk of fire and explosion is still present. Use water spray to disperse vapours. Isolate the area until the gas has dispersed. Ventilate and test the area before entering.

Use only grounded and non-sparking tools and equipment. Ensure equipotential linkage of containers and product recovery equipment.

Other issues relating to spills and releases

Notify government authorities if there has been a significant release to the environment. See *Section 13: Disposal considerations* for additional information regarding the disposal, recycling and recovery of the product.

SECTION 7 : HANDLING AND STORAGE

Precautions for safe handling of the product

Safe handling practices for users

Handling must conform to the LSST stipulations and its regulations, such as the RSST (in particular sections VII and X), the RSSM and the CSTC.

	Handle away from any source of ignition. Do not smoke. Use non-metallic tools. The apparatus must be grounded. Ventilate adequately or wear appropriate respirators. Handle safely according to standard methods and comply with the RSST, NFPA-30 and NFC. There is a CSA (Canadian Standards Association) code for natural gas and propane facilities (*CSA B149.1-00*). Use only in well-ventilated areas. See also OSHA regulations for handling this product, including *29 CFR 1910.110 Storage and handling of liquefied petroleum gases*. See Section 8: *Exposure controls / Personal protection* for details on individual and collective protective measures and equipment.
Additional precautions against physical and environmental hazards	Use and handle away from all sources of ignition and incompatible materials. Use only grounded, non-sparking tools and equipment. Provide equipotential bonding of containers and product recovery equipment. Minimize the risk of spilling product into the environment.
General hygiene	N/A
Specific requirements for explosibility and flammability	Keep this product away from flames, sparks and all potential heat sources or potential ignition. Do not smoke. Use only grounded and non-sparking tools and equipment and ensure equipotential binding of containers, materials and equipment used. Protect containers and containers from abrasion, static electricity and friction.
Specific requirements for storage conditions	N/A
Specific packaging requirements	Storage must conform to the LSST stipulations and its regulations, such as the RSST (in particular sections VII and X), the RSSM and the CSTC. According to the situation, the chapter Building of the Safety code and the CNPI can also apply. Refer to the competent government authorities for additional information on the specific use and storage requirements applicable to the product according to the regulations in force.
Incompatible substances or mixtures	Use, handle, store and store incompatible substances and mixtures separately. See Section 10: Stability and Reactivity for details on reactivity conditions and incompatible materials of the product.
Other storage and stockpiling requirements	Keep away from heat and ignition. Store in a cool place, away from oxidizing materials. Ground containers in a well-ventilated area. Compressed gas cylinders must comply with the Pressure Vessels Act *(L.R.Q., c. A-20.01)* and the regulations made thereunder. Compressed gas cylinders must be kept away from any source of heat likely to raise the temperature of the contents above 55°C, be fitted with the protective valve cap when not in use, be stored upright with the valves pointing upwards and be securely restrained in place. Compressed gas cylinders connected in series by a manifold shall be supported, held together and form a unit, using a frame or other installation designed for this purpose. Valves and safety devices must be protected from impact. Keep away from flames, sparks and excessive temperatures. Store in a container or container in good condition, kept tightly closed, clearly identified according to WHMIS 2015 requirements. Store only in approved containers.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

# CAS	Chemical Name	IDLH		RSST TLV						Notes
				VEMP		VECD		VP		
		mg/m³	ppm	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm	
74-82-8	Methane		N.A.		N.A.		N.A.		N.A.	SA
74-84-0	Ethane		N.A.		N.A.		N.A.		N.A.	SA
7727-37-9	Nitrogen		N.D.		N.D.		N.D.		N.D.	AS
124-38-9	Carbon dioxide		40 000	9 000	5000	54 000	30 000		N.D.	
75-66-1	Methyl-2-propanethiol-2		N.A.		N.A.		N.A.		N.A.	

Legend: C1, C2, C3 : Carcinogenic effect detected or suspected, DNOC : Dusts not otherwise classified, mg/m3 : milligrams per cubic meter of air, N/A : Not applicable, N.A. : Data not available, Pi : Inhalable dust, Pt : Total dust, ppm : parts per million, VEMP : Time-weighted average exposure limit (TWA), VECD : Short-term exposure limit (STEL), VP : Ceiling limit (CEV), SA: Simple Asphyxiant

Appropriate Engineering Controls

Use engineering controls such as closed enclosures, exhaust ventilation at source, or any other integrated automatic control system to keep air concentrations below the occupational exposure limit values in the table belowtop.

If possible, use a mechanical handling system to reduce personal contact.

Ensure that the equipment, tools and systems used are explosion-proof, grounded and/or equipped with an equipotential connection and apply control measures for the handling of combustible and explosive dust.

Handle according to good industrial hygiene practices and safety instructions.

See *Section 7: Handling and storage* for more information on precautions required for handling, use, storage and storage.

Individual protection measures

In accordance with good industrial hygiene practices, the wearing of personal protective equipment is required when other engineering controls already in place do not adequately protect against the risk of contamination.

General protection	Do not smoke where this product is handled, stored and used.
Eye / face protection	Wear eye protection if there is a risk of contact with pressurized natural gaseous gas. The selection of an eye protector, splash glasses, face shield, etc. depends on the nature of the work to be performed and the risk of exposure.
Skin protection	In case of risk of contact with gaseous natural gas wear a face shield. Fireproof clothing may also be worn, depending on the nature of the work and the risk of fire. Wear waterproof, flame retardant and antistatic gloves and protective clothing.
Respiratory protection	Wear a supplied-air respirator if the gas concentration in working areas is presenting any risk of asphyxiation. Attention: the limits of flammability should be considered during the evaluation of the necessity of exposing the staff to concentrations requiring a respiratory protection. In the event of insufficient ventilation or in situations where the concentration exceeds the exposure limit values (TLV), wear a respirator selected, fitted, used and maintained in accordance with the *Selection, use, and care of respirators Standard, CSA Z94.4-11* and respiratory protection program. *Type of respirator* : Supplied-air respirator.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Basic physical and chemical properties

Physical State	Gas	**Colour**	Colorless
Odour	Odorous product (mercaptan) for leak detection. Rotten egg smell.		
Flammability	Flammable Gas	**Melting / Freezing Point**	-182.5°C
Explosion Limits	lower (LEL) 5 % upper (UEL) 15 %	**Boiling point (or range)**	-161,5°à (1atm)
Flash point	-188°C (en vase clos)	**Auto-ignition temperature**	580°C
Decomposition temperature	N.A.	**Partition coefficient n-octanol/water (Log Kow)**	0,0812
Solubility	Soluble	**pH**	N/A
Density / Relative density	0,4415 at -162°C	**Kinematic viscosity**	N/A

Vapour pressure	110 kPa	**Relative vapour density**	≈ 0.555
Particle characteristics	N.A.		

Additional data on safety characteristics

Explosive substances and article Flammable gas and vapour.

Other informations N.A.

SECTION 10 : STABILITY AND REACTIVITY

Reactivity
Keep away from sources of ignition and heat, high temperatures, open flames, sparks, welding, static electricity and other ignition sources. Do not smoke.
Risk of violent reaction or explosion due to heat, friction or contact with incompatible materials.

Chemical stability
This product is generally stable under normal conditions of use and storage (ambient temperature, pressure and humidity).

Possibility of hazardous reactions
Risk of explosion/ inflammation in contact with :
Natural gas can burn or explode in an enclosed space when mixed with strong oxidants (peroxide, chlorine, chlorine dioxide, liquid oxygen).
Contact with oxidizers increases the possibility of explosion/fire.

Conditions to avoid
Keep away from all sources of heat or ignition and from places where fire risks are high.
Protect containers from damage (shock, friction, abrasion).
Avoid contact with incompatible substances and products.
Do not pressurize, cut, solder, braze, perforate, grind containers or expose them to a source of heat or ignition.
Prevent the accumulation of vapours in confined spaces.
Within flammability or explosive limits, may ignite in the presence of sufficient energy.

Incompatible materials
May burn or explode in enclosed space when mixed with strong oxidizers (peroxide, chlorine, chlorine dioxide, liquid oxygen).

Hazardous decomposition products
Carbon oxides CO, carbon monoxide, CO_2, fumes during combustion.

SECTION 11 : TOXICOLOGICAL INFORMATIONS

Information on the likely routes of exposure

Inhalation Natural gas, by moving air, acts as an asphyxiant. Replacing air with natural gas can cause headaches, impairment, errors in judgment, increasing tiredness and reduced coordination leading to seizures, coma and death. Narcotic at high concentrations.

Skin exposure The vapours are not irritating.

Eye exposure Non-irritating

Ingestion No data concerning an effect on the target organs was found in the consulted documentary sources.

Symptoms related to the physical, chemical and toxicological characteristics

Low exposure	Severe exposure
No data on low exposure symptoms	Simple asphyxiant, asphyxiation. Rapid breathing and rapid pulse, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscle weakness, tremors, cyanosis, narcosis, numbness of extremities, unconsciousness leading to central nervous system damage up to death by anoxia.

Short- and long-term exposure effects

Immediate effects	Delayed or chronic effects
See subsection *Specific Target Organ Toxicity* (STOT) Single exposure	See subsection *Specific Target Organ Toxicity* (STOT) Repeated exposure

Acute toxicity

This product contains orally toxic, dermal and respiratory ingredients.

Chemical Name	LD_{50} (oral)		LD_{50} (skin)		LC_{50} (inhalation) – 4 h	
	Value	Species	Value	Species	Value	Species
Methane	N.D.		N.D.		35 355 ppm	Mouse
Ethane	N.D.		N.D.		N.D.	
Nitrogen	N.D.		N.D.		N.D.	
Carbon dioxide	N.D.		N.D.		N.D.	
Methyl-2-propanethiol-2	4,729 mg/kg	Rat	2 000 mg/kg	Rabbit	26 643 ppm	Rat

Skin corrosion / irritation

This product is not irritating but may cause frostbite on contact with gas.

Serious eye damage / irritation

Non-irritating

Respiratory or skin sensitization

No data concerning the respiratory or skin sensitization was found in the consulted documentary sources.

Germ cell mutagenicity

No data is available for the mixture regarding mutagenicity.

Carcinogenicity

No data concerning a carcinogenic effect was found in the consulted documentary sources (OSHA, ACGIH).

Chemical Name	IARC	ACGIH®	NTP
Methane			
Ethane			
Nitrogen			
Carbon dioxide			
Methyl-2-propanethiol-2			

Reproductive toxicity

No data are available for the mixture regarding reproductive effects.

Specific Target Organ Toxicity (STOT) Single exposure

The main symptoms associated with asphyxia are rapid breathing and rapid pulse, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscle weakness, tremors, cyanosis, narcosis, numbness of the extremities, unconsciousness leading to damage to the central nervous system up to death from anoxia. Although considered non-toxic by inhalation, exposure to high levels of GNG may cause nervous system depression (rapid breathing, dizziness, drowsiness, headache, narcotic-like symptoms), but no long-term effects.

Specific Target Organ Toxicity (STOT) Repeated exposure

No data concerning the reproductive effect was found in the consulted documentary sources.

Aspiration hazard

No data is available for the mixture regarding aspiration hazard.

Interactive effects

N/A

Other information

The chemical, physical, and toxicological properties have not been fully investigated. Occupational poisoning is part of the list of diseases, infections and intoxications reportable under the *Public Health Act (R.S.Q., c. S-2.2)*.

SECTION 12 : ECOLOGICAL INFORMATIONS

This product is classified as toxic to the environment.

Ecotoxicological data

Fish and crustaceans toxicity No data available for the mixture.

Chemical Name	Species	Test	Result	Duration	Method / Conditions
Methane	N/A				
Ethane	N/A				
Nitrogen	N/A				
Carbon dioxide	N/A				
Methyl-2-propanethiol-2	Rainbow trout	CL_{50}	34 mg/L	96h	OCDE 203

Algae and aquatic plants toxicity No data available for the mixture.

Chemical Name	Species	Test	Result	Duration	Method / Conditions
Methane	N/A				
Ethane	N/A				
Nitrogen	N/A				
Carbon dioxide	N/A				
Methyl-2-propanethiol-2	Green algae	CE_{50r}	24 mg/L	72h	OCDE 201

Micro-organisms toxicity No data available for the mixture.

Chemical Name	Species	Test	Result	Duration	Method / Conditions
Methane	N/A				
Ethane	N/A				
Nitrogen	N/A				
Carbon dioxide	N/A				
Methyl-2-propanethiol-2	N/A				

Other organisms toxicity No data available for the mixture.

Chemical Name	Species	Test	Result	Duration	Method / Conditions
Methane	N/A				
Ethane	N/A				
Nitrogen	N/A				
Carbon dioxide	N/A				
Methyl-2-propanethiol-2	Greater daphnia	CE_{50}	6,7 mg/L	48h	OCDE 202

Persistence and degradability No data available for the mixture.

Chemical Name	Degradability values
Methane	N/A
Ethane	N/A
Nitrogen	N/A
Carbon dioxide	N/A
Methyl-2-propanethiol-2	Aerobic - Duration of exposure 63 days Result: 6 % - Not readily biodegradable. (OECD Guideline 301D)

Bioaccumulative potential No data available for the mixture.

Chemical Name	Bioaccumulative values
Methane	N/A

Ethane	N/A
Nitrogen	N/A
Carbon dioxide	N/A
Methyl-2-propanethiol-2	N/A

Mobility in soil No data available for the mixture.

Chemical Name	Mobility values
Methane	N/A
Ethane	N/A
Nitrogen	N/A
Carbon dioxide	N/A
Méthyl-2-propanethiol-2	N/A

Other adverse effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 : DISPOSAL CONSIDERATIONS

Disposal methods Vent the gas to the atmosphere.
For large quantities, consult the regional office of the environmental authority having jurisdiction.

SECTION 14 : TRANSPORT INFORMATION

Transport classification

Regulation	UN Number	UN Proper Shipping Name	Technical Name (for N.O.S. entry)	Transport hazard class(es)	Packing group
TDG	1971	NATURAL GAS, (with high methane content) COMPRESSED		2.1	

Environmental hazards See *Section 6: Accidental release measures* and *Section 12 : Ecological Information* for details on the effects of the product on the environment and the precautions to be taken to eliminate or limit these effects.

Special precautions for user Check the packaging for compliance with applicable regulations before shipping the product. Do not smoke and provide ventilation in the space in which the product is transported.
Avoid product contact with skin, eyes and clothing.

Transport in bulk according to IMO instruments N/A

SECTION 15 : REGULATORY INFORMATIONS

Safety, health and environmental regulations specific for the product The classification of this product has been made according to the criteria of the GHS and this SDS contains all the information required by the GHS.
This product is controlled under WHMIS 2015 and subject to *Hazardous Products Act* (S.C. 1985, ch. H-3) and to *Hazardous Products Regulations* (SOR/2015-17) requirements.
Act respecting occupational health and safety (R.S.Q. ch. S-2.1)
Regulation respecting occupational health and safety (R.S.Q. ch. S-2.1, r. 19.01)
Transportation of Dangerous Goods Act (S.C. 1992, ch. 34)
Transportation of Dangerous Goods Regulations (SOR/2001-286)
Transportation of Dangerous Substances Regulation (R.S.Q. ch. C-24.2, r. 43)

Prohibition, restriction or particular dispositions depending on the territory *Environmental Protection Act* (S.C. 1999, ch. 33)
*Environment Quality Act (*R.S.Q. ch. Q-2)

Regulation respecting hazardous materials (R.S.Q. chapitre Q-2, r. 32)

SECTION 16 : OTHERS INFORMATIONS

SDS prepared by ENVIROSPEC
www.envirospec.qc.ca

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Notice to reader This document has been prepared to the best of current knowledge and available scientific literature in accordance with the requirements of known and consulted local, regional, national and international regulations.
The information provided in this document is accurate. However, neither the Supplier nor any of its subcontractors may assume any responsibility whatsoever for the accuracy or completeness of the information contained in this document.
Any substance or mixture may present unknown hazards to date and, although some hazards are described in this document, it cannot be guaranteed that there are none. Use of this product should be done with caution.
It is solely the user's responsibility to determine the safety and protection measures to be applied when this product is transported, handled, stored, disposed of or otherwise used.

Data Sources / Reference Documents Safety data sheets of the original suppliers of the products used for the mixture

CANUTEC / Transport Canada

European Chemicals Agency (ECHA)

Exposure limit values - IFA (Germany)

Globally harmonized system of classification and labelling of chemicals (GHS), UN, Eighth revised edition (2019)

NIOSH Pocket Guide to Chemical Hazards – US Department of Health and Human Services (2005)

Toxicological directory - CNESST

NFPA Standards – US National Fire Protection Association

Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices Booklet – ACGIH (2022)

All ingredients are part of the Domestic Substances List in Canada.

Abbreviations / Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Transport of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ANSI	American National Standards Institute
BCF	Bioconcentration factor
BEI	Biological Exposure Indices
BOD_5	Biochemical oxygen demand on 5 days
CAS	Chemical Abstract Services
CEN	European Committee for Standardization
CEV	Ceiling Exposure Value
CLP	Regulation (EC) n° 1272/2008 on classification, labelling and packaging of substances and mixtures
CNESST	Labour standards, equity, occupational health and safety commission (Quebec)
CSA	Canadian Standards Association
COD	Chemical oxygen demand
EC_{50}	Effective Concentration / Concentration of a substance where 50% of the population has an effect after a specified exposure time
ECHA	European Chemicals Agency
EGC Code	Code for Existing Ships Carrying Liquefied Gases in Bulk
EINECS	European Inventory of Existing Commercial Chemical Substances

EU	European Union
GC Code	Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk
GHS	Globally harmonized system of classification and labelling of chemicals
HMTA	Hazardous Materials Transportation Act - 49 U.S.C. 5101 et seq.
HPA	Hazardous Products Act (Canada)
HPR	Hazardous Products Regulations (Canada)
IARC	International Agency for Research on Cancer
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IDLH	Immediately Dangerous to Life or Health
IFA	Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (Germany)
IGC Code	International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk
IMDG Code	International Maritime Dangerous Goods code
IMO	International Maritime Organization
IMSBC Code	International Maritime Solid Bulk Cargoes Code
LC_{50}	Lethal Concentration / Concentration of the substance in air causing 50% (half) death in experimental animals during the observation period
LD_{50}	Lethal Dose / Amount of a single-dose substance that causes 50% (half) death in a group of test animals
LEL	Lower explosive limit
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978.
N/A	Not applicable - Not available
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
N.O.S.	Not otherwise specified
NOEC	No observed effect concentration
NTP	National Toxicology Program
ODP	Ozone Depleting Potential
OECD	Organization for Economic Cooperation and Development
REACH	Regulation (EC) n° 1907/2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
RSST	Regulation respecting occupational health and safety (Quebec)
SADT	Self-accelerating decomposition temperature
SDS	Safety data sheet
SOLAS	International Convention for the Safety of Life at Sea
S.T.	Sampling Time
STEL	Short-Term Exposure Limit Value
SVC	Saturated vapour concentration
TDG	Transportation of Dangerous Goods Regulations (Canada)
TLV	Threshold Limit Values
TRGS	Technischen Regeln für Gefahrstoffe (Germany)
TWA	Time Weighted Average Value
UEL	Upper explosive limit
UN	United Nations Organization
US	United States
WHMIS	Workplace Hazardous Materials Information System (Canada)