Aspen 4

Safety Data Sheet

according to SOR/2015-17, Hazardous Products Regulations (HPR) , as amended by SOR/2022-272
Revision date: 2025-12-05 Supersedes: 2021-07-06 Version: 2.0

SECTION 1 Identification

1.1. GHS Product identifier

Product form : Mixture
Trade name : Aspen 4
Product code : 101002

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Intended for general public
Use of the substance/mixture : Fuel for 4-stroke motors.
Recommended use : Fuels
Restrictions on use : Other than stated above.

1.4. Supplier's details

Manufacturer
Lantmännen Aspen AB
Iberovägen 2
Hindås, SE-438 54
Sweden
T +46 301 230000
aspensds@lantmannen.com - www.aspen.se

Distributor
Equipements E S F Inc
6500 Rue Armand-Viau
Québec, QC G2C 2J6
Canada
T +1 418 845-2318
info@esfdirect.com - https://www.esfdirect.com

1.5. Emergency phone number

Emergency number : +46 301 230000 (08.00-16.30 CET)
For non-emergency personnel

Country/Area	Organization	Emergency number
USA, Canada, Mexico	CHEMTREC.	1-800-424-9300 * +1 703-527 3887 ** For Chemical Emergency Call CHEMTREC 24hr/day 7days/week, * Within USA and Canada, ** Outside USA and Canadact (collect calls accepted)

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Flammable liquids, Category 1	H224	Extremely flammable liquid and vapor.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness.
Aspiration hazard, Category 1	H304	May be fatal if swallowed and enters airways.

Full text of H statements : see section 16

2.2. GHS label elements, including precautionary statements

GHS CA labeling

Hazard pictograms (GHS CA) :

Signal word (GHS CA) : Danger

Hazard statements (GHS CA) : H224 - Extremely flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin 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.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P243 - Take action to prevent static discharges.
P241 - Use explosion-proof electrical, ventilating, lighting equipment.
P242 - Use non-sparking tools.
P280 - Wear protective gloves, eye protection, face protection.
P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing vapors.
P405 - Store locked up.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to approved waste recipient, in an open container.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P332+P313 - If skin irritation occurs: Get medical advice or attention.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or a doctor.
P331 - Do NOT induce vomiting.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER or a doctor if you feel unwell.
P370+P378 - In case of fire: Use water spray, powder, foam (carbon dioxide (CO2)) to extinguish.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Prolonged or repeated contact may cause skin to become dry or cracked. At high concentrations, the vapors can be irritating to the respiratory system.

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Alkylate	Naphtha (petroleum), full-range alkylate, butane-contg.	CAS-No.: 68527-27-5	80 – 95	Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Isopentane	isopentane, 2-methylbutane	CAS-No.: 78-78-4	5-13	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
2,2-Dimethylbutane	-	CAS-No.: 75-83-2	4-9	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
n-Pentane (Component)	pentane	CAS-No.: 109-66-0	2-5	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
n-Butane	butane	CAS-No.: 106-97-8	0.2-3.5	Flam. Gas 1, H220 Press. Gas (Diss.), H280
2-Methylpentane	-	CAS-No.: 107-83-5	1-3.5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get medical advice/attention. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. May result in aspiration into the lungs, causing chemical pneumonia.

First-aid measures general : IF exposed or concerned: Get medical advice/attention. If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label.

Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : May cause headache, nausea and irritation of respiratory tract. May result in aspiration into the lungs, causing chemical pneumonia.

Symptoms/effects after skin contact : Irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause slight irritation.
Symptoms/effects after ingestion : Risk of lung edema. Ingestion may cause nausea and vomiting.

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

Other medical advice or treatment : Treat symptomatically. Symptoms may be delayed.

SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water fog. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : Extremely flammable liquid and vapor. The vapors are denser than air and may travel along the ground. Distance ignition possible. On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray.
Explosion hazard : May form flammable/explosive vapor-air mixture.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Move containers from fire area if it can be done without personal risk. Move away from the container and cool with water from a protected position. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Precautionary measures fire : Keep container tightly closed and away from heat, sparks and flame. In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required.
Other information : Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Could be ignited by heat, sparks or flame.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Note: Extremely flammable liquid; also see section 5. No open flames. No smoking. Stop leak if safe to do so. Absorb spillage to prevent material-damage. Notify authorities if product enters sewers or public waters.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Cover spill with non combustible material, e.g.: sand, earth, vermiculite. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.
See Section 13 for disposal information. See Section 8 for information on personal protection equipment.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapors. Avoid contact with skin and eyes.
Hygiene measures	:	Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	:	Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible products	:	Oxidizing agent.
Storage temperature	:	Store at maximum temperature of 30°C / 86°F.
Packaging materials	:	Always store product in container of same material as original container.
Specific end uses	:	The identified uses for this product are detailed in Section 1.2.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

n-Butane (106-97-8)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Butane
OEL TWA	1000 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Butane
VEMP (OEL TWAEV)	1900 mg/m³
	800 ppm
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Butane, all isomers: n-butane
OEL STEL	1000 ppm
Notations and remarks	EX (the 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	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair

n-Butane (106-97-8)	
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Butane, All isomers
OEL TWA	1000 ppm
OEL STEL	1250 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Butane, All isomers
OEL TWA	1000 ppm
OEL STEL	1250 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
Local name	Butane, All isomers
OEL TWAEV	1000 ppm
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Butane
OEL STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Notations and remarks	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Butane. All isomers
OEL TWA	1000 ppm

n-Butane (106-97-8)	
OEL STEL	1250 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

Isopentane (78-78-4)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Isopentane (Pentane, all isomers)
OEL TWA	1770 mg/m³
	600 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Pentane (all isomers)
VEMP (OEL TWAEV)	1000 ppm
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1000 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Pentane, all isomers (1989)
OEL TWA	1000 ppm
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025

Isopentane (78-78-4)	
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
Local name	Pentane, All isomers
OEL TWAEV	1000 ppm
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Isopentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

2,2-Dimethylbutane (75-83-2)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Dimethylbutane (Hexane, all isomers, except n-Hexane)
OEL TWA	1760 mg/m³
	500 ppm
OEL STEL	3500 mg/m³
	1000 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Hexane, all isomers except n-Hexane
OEL TWA	200 ppm

2,2-Dimethylbutane (75-83-2)	
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	2,2-Dimethyl butane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Hexane isomers, other than n-Hexane
OEL TWA	500 ppm
OEL STEL	1000 ppm
Notations and remarks	CNS impair; URT & eye irr
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	2,2-Dimethyl butane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	2,2-Dimethyl butane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025
Canada (Ontario) - Occupational Exposure Limits	
Local name	Hexane isomers, other than n-Hexane
OEL TWAEV	500 ppm
	1000 ppm
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	2,2-Dimethyl butane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025

n-Pentane (109-66-0)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Pentane, all isomers

n-Pentane (109-66-0)	
OEL TWA	1770 mg/m³
	600 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Pentane (all isomers)
VEMP (OEL TWAEV)	1000 ppm
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	1000 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm

n-Pentane (109-66-0)	
OEL STEL	750 ppm
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-090-2024)
Canada (Ontario) - Occupational Exposure Limits	
Local name	Pentane, All isomers
OEL TWAEV	1000 ppm
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Pentane
OEL TWA	2950 mg/m³
	1000 ppm
Notations and remarks	TLV® Basis: Narcosis; resp tract irr
Regulatory reference	ACGIH 2025
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Pentane, all isomers
OEL TWA	600 ppm
OEL STEL	750 ppm
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

2-Methylpentane (107-83-5)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	2-Methylpentane (Hexane (all isomers except n-hexane, isohexane))
OEL TWA	1760 mg/m³
	500 ppm
OEL STEL	3500 mg/m³
	1000 ppm
Regulatory reference	Alberta Regulation 191/2021
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Hexane, all isomers except n-Hexane
OEL TWA	200 ppm
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	2-Methyl pentane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025

2-Methylpentane (107-83-5)	
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	2-Methyl pentane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	2-Methyl pentane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025
Canada (Ontario) - Occupational Exposure Limits	
Local name	Hexane isomers, other than n-Hexane
OEL TWAEV	500 ppm
	1000 ppm
Regulatory reference	Occupational Health and Safety Act, R.S.O. 1990, c. O.1 - R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	2-Methyl pentane
OEL TWA	200 ppm
Notations and remarks	TLV® Basis: URT irr; lung dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2025

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Use spark-/explosionproof appliances and lighting system. Wear recommended personal protective equipment. Handle in accordance with good industrial hygiene and safety procedures.

Environmental exposure controls : Avoid the spillage or runoff entering drains, sewers or watercourses. Professional and Consumer product use leading to emission of volatiles to air. Volatile compounds subject to air emission controls. See Section 7 for information on safe handling. Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection:				
Protective gloves				
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**
Disposable gloves	Nitrile rubber (NBR), Viton® II	6 (> 480 minutes)	>0,4 mm	

Eye protection:
If there is a risk of liquid being splashed : Wear tight fitting safety glasses or facial screen

Skin and body protection:
If there is a risk of liquid being splashed :Wear suitable protective clothing. Contaminated clothing may pose a risk of fire/explosion.

Respiratory protection:		
Wear suitable respiratory equipment in case of insufficient ventilation/high vapour concentration		
Device	**Filter type**	**Condition**
Reusable half mask	Filter AX (brown)	Short term exposure

Personal protective equipment symbol(s):

Thermal hazard protection:
No additional information available.
Other information:
Do not eat, drink or smoke when using this product.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	clear.
Color	:	Colorless
Odor	:	Gasoline-like odour
Odor threshold	:	No data available
pH	:	Not relevant
Relative evaporation rate (butyl acetate=1)	:	> 10
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	30 – 200 °C EN ISO 3405
Flash point	:	-45 °C
Auto-ignition temperature	:	> 300 °C
Decomposition temperature	:	Not relevant
Flammability (solid, gas)	:	Not applicable
Vapor pressure	:	55 – 65 kPa EN 13016-1 (100°F)
Relative vapor density at 20°C	:	> 1 air = 1
Relative density	:	No data available
Density	:	690 – 720 kg/m³ EN ISO 12185 (15°C)
Solubility	:	Soluble in hydrocarbons. Water: 1 – 6 mg/l
Partition coefficient n-octanol/water (Log Pow)	:	4.3 – 4.8 Calculated value
Viscosity, kinematic	:	< 1 mm²/s (40°C)
Explosion limits	:	See below Lower explosion limit: 1 vol % Upper explosion limit: 8 vol %
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

Specific conductivity	:	50 – 1000 pS/m EN 15938 (20°C)

SECTION 10 Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : Avoid contact with : All heat sources, including direct sunlight. No flames, no sparks. Eliminate all sources of ignition. Take action to prevent static discharges.
Incompatible materials : Oxidizing agent.
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time: : No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

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

Alkylate (68527-27-5)	
LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg (OECD 402 method)
LC50, Inhalation, rat	> 5610 mg/m³ ((OECD 403 method))

Isopentane (78-78-4)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LC50 Inhalation - Rat	> 25.3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

n-Pentane (109-66-0)	
LD50 oral rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LC50 Inhalation - Rat	> 25.3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

2-Methylpentane (107-83-5)	
LD50 oral rat	≈ 15.84 mg/kg body weight Animal: rat

Skin corrosion/irritation : Causes skin irritation.
pH: Not relevant
Serious eye damage/irritation : Not classified
Slightly irritant but not relevant for classification
pH: Not relevant
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause drowsiness or dizziness.
STOT-repeated exposure : Not classified

Isopentane (78-78-4)	
NOAEC (inhalation,rat,vapor,90 days)	30 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: other: U.S. EPA/FIFRA Guidelines §82-4, Guideline: EPA OTS 798.2450 (90-Day Inhalation Toxicity), Guideline: other:U.S. EPA/TSCA Guidelines 40 CFR §798.6059, and §798.6059, 798.6200, 798.6400, Guideline: other:EU Guideline 87/302/EEC

n-Pentane (109-66-0)	
NOAEC (inhalation,rat,vapor,90 days)	30 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Guideline: other:, Guideline: EPA OTS 798.2450 (90-Day Inhalation Toxicity), Guideline: other:, Guideline: other:

Aspiration hazard : May be fatal if swallowed and enters airways.

Aspen 4	
Viscosity, kinematic	< 1 mm²/s (40°C)

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : May cause headache, nausea and irritation of respiratory tract. May result in aspiration into the lungs, causing chemical pneumonia.

Symptoms/effects after skin contact : Irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : Risk of lung edema. Ingestion may cause nausea and vomiting.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general : May cause long lasting harmful effects to aquatic life.

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : May cause long lasting harmful effects to aquatic life

Aspen 4	
NOEC chronic algae	10 mg/l (=NOELR, 72 h) (Algae, Raphidocelis subcapitata) (OECD 201)
LLR50, (Fish embryo, Danio rerio), acute	873 mg/l (96 Hours, (OECD 236))
ELR50, (Daphnia magna Straus), acute	> 1000 mg/l (48 Hours, (OECD 202))
ELR50, (Algae, Raphidocelis subcapitata)	> 1000 mg/l (72 Hours, (OECD 201))

Alkylate (68527-27-5)	
EC50 - Crustacea [1]	> 100 mg/l
NOELR, algae, Pseudokirchnerella subcapitata	0,5 mg/l (72 Hours)
EL50, algae, Pseudokirchnerella subcapitata	3,1 mg/l (72 Hours)

2-Methylpentane (107-83-5)	
EC50 96h - Algae [1]	4.321 mg/l Test organisms (species): other:

12.2. Persistence and degradability

Aspen 4	
Persistence and degradability	Not readily biodegradable. Inherently biodegradable. Contains volatile component(s), may spread in atmosphere. Can be degraded by photochemial processes.

12.3. Bioaccumulative potential

Aspen 4	
Bioaccumulative potential	Contains bioaccumulative component(s).
Partition coefficient n-octanol/water (Log Kow)	4.3 – 4.8 Calculated value

Alkylate (68527-27-5)	
Bioaccumulative potential	Bioaccumulation possible.
Partition coefficient n-octanol/water (Log Pow)	> 3
Partition coefficient n-octanol/water (Log Kow)	0

12.4. Mobility in soil

Aspen 4	
Ecology - soil	Highly volatile liquid. The product evaporates readily. Floats on water. Product adsorbs onto the soil.

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : The product evaporates readily. In case of large spillages: Forms thin oil film on surface of water. May be harmful to aquatic organisms, to flora, to soil organisms.

Other information : Avoid release to the environment. Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII.

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Product and packaging containing residues of or contaminated by dangerous substances; To be disposed of as hazardous waste. When totally empty, containers are recyclable like any other packing. Disposal must be done according to official regulations.

Additional information : Flammable vapors may accumulate in the container. Do not re-use empty containers.

Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with TDG / IMDG / IATA

14.1. UN Number

UN-No. (TDG) : UN1203

UN-No. (IMDG) : 1203

UN-No. (IATA) : 1203

14.2. UN Proper Shipping Name

Proper Shipping Name (TDG) : PETROL

Proper Shipping Name (IMDG) : PETROL

Proper Shipping Name (IATA) : Petrol

14.3. Transport hazard class(es)

TDG

Transport hazard class(es) (TDG) : 3
Hazard labels (TDG) : 3
:

IMDG

Transport hazard class(es) (IMDG) : 3
Hazard labels (IMDG) : 3
:

IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3
:

14.4. Packing group, if applicable

Packing group (TDG) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Dangerous for the environment : No
Other information : No supplementary information available.

14.6. Special precautions for user

TDG

UN-No. (TDG) : UN1203
Emergency Response Guide (ERG) Number : 128

IMDG

EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78[9] and the IBC Code[10]

IBC code : Not applicable.

SECTION 15 Regulatory information

n-Butane (106-97-8)

Listed on the Canadian DSL (Domestic Substances List)

Isopentane (78-78-4)

Listed on the Canadian DSL (Domestic Substances List)

2,2-Dimethylbutane (75-83-2)

Listed on the Canadian DSL (Domestic Substances List)

Canada DSL & NDSL Flags	Significant New Activity (SNAc) provisions of the Act apply

n-Pentane (109-66-0)

Listed on the Canadian DSL (Domestic Substances List)

Canada DSL & NDSL Flags	Significant New Activity (SNAc) provisions of the Act apply

2-Methylpentane (107-83-5)

Listed on the Canadian DSL (Domestic Substances List)

Canada DSL & NDSL Flags	Significant New Activity (SNAc) provisions of the Act apply

n-Butane (106-97-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Isopentane (78-78-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

2,2-Dimethylbutane (75-83-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

n-Pentane (109-66-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

2-Methylpentane (107-83-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16 Other Information

Revision date : 2025-12-05

Supersedes	:	2021-07-06
Data sources	:	Supplier Safety Data Sheet. Applicable legislation. Report No. 2017, Aspen 4, Raphidocelis subcapitata Growth Inhibition Test, Hydrotox Labor (OECD 201) 7 August 2025. Report No. 2018, Aspen 4, Daphnia magna Acute Immobilisation Test, Hydrotox Labor (OECD 202) 7 August 2025. Report No. 2019, Aspen 4, Fish Embryo Acute Toxicity (FET) Test, Hydrotox Labor (OECD 236) 8 August 2025.
Training advice	:	See Section 7 for information on safe handling.

Full text of hazard classes and H-statements:	
H220	Extremely flammable gas
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

Abbreviations and acronyms:	
CAS-No.	Chemical Abstracts Service number
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organization for Economic Co-operation and Development

Abbreviations and acronyms:	
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
WGK	Water Hazard Class
vPvB	Very Persistent and Very Bioaccumulative

Safety Data Sheet (SDS), Canada

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.