

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Acetonitrile

REACH No. : 01-2119471307-38-XXXX

CAS-No. : 75-05-8

Index Number : CH-L3-A005

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company VALERIAN LABS HOLDING CORP
Address 1130-1971 BROADWAY STREETPORT
COQUITLAM, BC V3C 0C9 CANADA
Telephone +1 (604)-710-0869
E-mail: info@valerianlabs.com

1.4 Emergency telephone

Number: 1-888-226-8832 CANUTEC (CANADA)
1-800-424-9300 CHEMTREC (USA)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

In accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Eye irritation (Category 2), H319





2.2 Label elements

Labelling in accordance with GHS Standards

Pictogram



Signal Word

Danger

Hazard statement(s)

H225

Highly flammable liquid and vapor.

H302 + H312 + H332

Harmful if swallowed, in contact with skin or if inhaled.

H319

Causes serious eye irritation.

Precautionary statement(s)

P210

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

P280

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

P301 + P312

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338

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

Supplemental Hazard Statements

none

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard statement(s)

none

Precautionary statement(s)

none

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Methyl cyanide





Formula : C₂H₃N
Molecular weight : 41,05 g/mol
CAS-No. : 75-05-8
EC-No. : 200-835-2
Index-No. : CH-L3-A005

Component	Classification	Concentration
Acetonitrile		
CAS-No.	75-05-8	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; H225, H302, H332, H312, H319
EC-No.	200-835-2	
Index-No.	CH-L3-A005	
		<= 100 %

SECTION 4: First aid measures

4.1 First-Aid Procedures:

- General advice: Share this material safety data sheet with the attending physician.
- If inhaled: Move the affected person to fresh air. If breathing ceases, perform mouth-to-mouth resuscitation or artificial respiration and, if necessary, administer oxygen. Promptly seek medical assistance.
- In case of skin contact: Remove contaminated clothing immediately. Rinse the affected skin with water or take a shower. Consult a physician.
- If there's eye contact: Thoroughly flush the eyes with an abundant amount of water. Consult with an ophthalmologist and remove contact lenses if used.
- If swallowed: Have the individual drink water immediately (not exceeding two glasses). Consult a physician.
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4.2 Most Significant Symptoms and Effects:

- The most important symptoms and effects known are detailed in the product labelling (see section 2.2) and/or section 11.

4.3 Recommendations for Immediate Medical Attention and Special Treatment:

- No specific data is available regarding the need for immediate medical attention or special treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder





Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Carbon oxides

Nitrogen oxides (NO_x)

Combustible.

Fire may cause evolution of:

nitrogen oxides, Hydrogen cyanide (hydrocyanic acid)

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Filled under nitrogen. Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion





Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Workers	Inhalation	Acute local effects, Acute systemic effects	68 mg/m ³
Workers	Skin contact	Long-term systemic effects	32,2mg/kg BW/d
Workers	Inhalation	Long-term local effects, Long-term systemic effects	68 mg/m ³
Consumers	Inhalation	Acute local effects	220 mg/m ³
Consumers	Inhalation	Acute systemic effects	22 mg/m ³
Consumers	Inhalation	Long-term systemic effects	4,8 mg/m ³

Predicted No Effect Concentration (PNEC)

Compartment	Value
Water	10 mg/l
Soil	2,41 mg/kg
Sea water	1 mg/l
Fresh water	10 mg/l
Fresh water sediment	7,53 mg/kg
Onsite sewage treatment plant	32 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/Face Protection:

Employ eye protection equipment that has been tested and approved in accordance with relevant government standards, such as NIOSH (US) or EN 166 (EU). Utilize safety glasses.



**Skin Protection:**

- This recommendation specifically pertains to the product outlined in the safety data sheet provided by us and for its intended use. When dissolving or mixing with other substances or under conditions different from those specified in EN374, take appropriate precautions.

Body Protection:

- Wear flame-retardant antistatic protective clothing.

Respiratory Protection:

- Use Filter A (according to DIN 3181) for vapors of organic compounds as the recommended filter type.
- The entrepreneur is responsible for ensuring that maintenance, cleaning, and testing of respiratory protective devices are conducted following the manufacturer's instructions and well-documented.

Control of Environmental Exposure:

- Prevent the product from entering drains, as there is a risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--|-----------------------------|
| a) Physical state | clear, liquid |
| b) Color | colorless |
| c) Odor | ether-like |
| d) Melting point/freezing point | Melting point/range: -48 °C |
| e) Initial boiling point and boiling range | 81 - 82 °C |
| f) Flammability (solid, gas) | No data available |





- | | |
|---|--|
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 16 %(V)
Lower explosion limit: 4,4 %(V) |
| h) Flash point | 2,0 °C - closed cup |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | No data available |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: 0,350 Pas at 20,00 °C |
| m) Water solubility | 1.000 g/l at 25 °C completely soluble |
| n) Partition coefficient: n-octanol/water | log Pow: -0,54 at 25 °C - Bioaccumulation is not expected. |
| o) Vapor pressure | 98,64 hPa at 20 °C |
| p) Density | 0,786 g/mL at 25 °C |
| Relative density | No data available |
| q) Relative vapor density | No data available |
| r) Particle characteristics | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | none |

9.2 Other safety information

Surface tension 29,0 mN/m at 20,0 °C

Relative vapor density 1,42 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong bases





perchlorates
perchloric acid
conc. sulfuric acid
with
Heat.

Risk of ignition or formation of inflammable gases or vapours with:

Oxidizing agents

Nitric acid

nitrogen dioxide

with

Catalyst

Generates dangerous gases or fumes in contact with:

Acids

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Mouse - male and female - 617 mg/kg

(OECD Test Guideline 401)

Acute toxicity estimate Oral - 617 mg/kg

(Calculation method)

LC50 Inhalation - Mouse - male and female - 4 h - 6,022 mg/l - vapor

(OECD Test Guideline 403)

Acute toxicity estimate Dermal - 1.500 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2015, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye irritation.

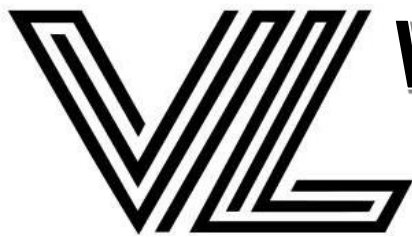
(OECD Test Guideline 405)

Remarks: Classified according to Regulation (EU) 1272/2015, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Buehler Test - Guinea pig





Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: US-EPA

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Result: Positive results were obtained in some in vitro tests.

Remarks: (National Toxicology Program)

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Metabolic activation: Metabolic activation

Result: negative

Remarks: Sister chromatid exchange

Test system: *Saccharomyces cerevisiae*

Metabolic activation: without metabolic activation

Result: positive

Remarks: Cytogenetic analysis

(ECHA)

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Species: Mouse

Application Route: Intraperitoneal

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Animal testing did not show any effects on fertility.

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.





Aspiration hazard

No aspiration toxicity classification

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Treat as cyanide poisoning., Always have on hand a cyanide first-aid kit, together with proper instructions., The onset of symptoms is generally delayed pending conversion to cyanide., Nausea, Vomiting, Diarrhea, Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness, impaired judgment, Lack of coordination, stupor, death
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 1.640 mg/l - 96 h
Remarks: (ECHA)

Toxicity to algae static test NOEC - Phaeodactylum tricornutum - 400 mg/l - 72 h (ISO 10253)
static test ErC50 - Phaeodactylum tricornutum - 9.696 mg/l - 72 h (ISO 10253)

Toxicity to bacteria

Toxicity to fish(Chronic toxicity) flow-through test NOEC - Oryzias latipes - 102 mg/l - 21 d (OECD Test Guideline 204)

12.2 Persistence and degradability

Biodegradability Result: 70 % - Readily biodegradable.
(OECD Test Guideline 310)

12.3 Bio accumulative potential

No bioaccumulation is to be expected (log Pow <= 4).

12.4 Mobility in soil

Not expected to adsorb on soil.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.





Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : FLAMMABLE LIQUIDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of other abbreviations

These are abbreviations and acronyms commonly used in the field of chemical safety, regulation, and transportation:

1. ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
2. ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
3. AIIC - Australian Inventory of Industrial Chemicals
4. ASTM - American Society for the Testing of Materials
5. bw - Body weight
6. CMR - Carcinogen, Mutagen, or Reproductive Toxicant
7. DIN - Standard of the German Institute for Standardization
8. DSL - Domestic Substances List (Canada)
9. ECx - Concentration associated with x% response
10. ELx - Loading rate associated with x% response
11. EmS - Emergency Schedule
12. ENCS - Existing and New Chemical Substances (Japan)
13. ErCx - Concentration associated with x% growth rate response
14. GHS - Globally Harmonized System
15. GLP - Good Laboratory Practice
16. IARC - International Agency for Research on Cancer
17. IATA - International Air Transport Association
18. IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
19. IC50 - Half maximal inhibitory concentration
20. ICAO - International Civil Aviation Organization
21. IECSC - Inventory of Existing Chemical Substances in China





22. IMDG - International Maritime Dangerous Goods
23. IMO - International Maritime Organization
24. ISHL - Industrial Safety and Health Law (Japan)
25. ISO - International Organization for Standardization
26. KECI - Korea Existing Chemicals Inventory
27. LC50 - Lethal Concentration to 50% of a test population
28. LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
29. MARPOL - International Convention for the Prevention of Pollution from Ships
30. n.o.s. - Not Otherwise Specified
31. NO(A)EC - No Observed (Adverse) Effect Concentration
32. NO(A)EL - No Observed (Adverse) Effect Level
33. NOELR - No Observable Effect Loading Rate
34. NZIoC - New Zealand Inventory of Chemicals
35. OECD - Organization for Economic Co-operation and Development
36. OPPTS - Office of Chemical Safety and Pollution Prevention
37. PBT - Persistent, Bio accumulative, and Toxic substance
38. PICCS - Philippines Inventory of Chemicals and Chemical Substances
39. (Q)SAR - (Quantitative) Structure Activity Relationship
40. REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals
41. RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
42. SADT - Self-Accelerating Decomposition Temperature
43. SDS - Safety Data Sheet
44. TCSI - Taiwan Chemical Substance Inventory
45. TECI - Thailand Existing Chemicals Inventory
46. TSCA - Toxic Substances Control Act (United States)
47. UN - United Nations
48. UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods
49. vPvB - Very Persistent and Very Bio accumulative

Additional information

The provided information is considered accurate but is not intended to cover every aspect and should be regarded as a general reference. The content in this document is derived from our current understanding and is relevant to the product concerning the necessary safety measures.

