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

1.1 Product identifiers

Product name	:	Acetyl chloride
REACH No.	:	The exemption from registration, tonnage falling below the registration threshold, or the anticipation of registration at a later deadline applies to this substance or its intended uses.
CAS-No.	:	106-95-6
Index-No.	:	CH-L3-A008

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 3), H301
Acute toxicity, Inhalation (Category 3), H331
Skin corrosion (Sub-category 1B), H314
Serious eye damage (Category 1), H318
Germ cell mutagenicity (Category 1B), H340

Carcinogenicity (Category 1B), H350
Short-term (acute) aquatic hazard (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation

Pictogram

Signal Word	Danger
Hazard statement(s)	
H225	Highly flammable liquid and vapor.
H301 + H331	Toxic if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H340	May cause genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
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
	Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word	Danger
Hazard statement(s)	
H340	May cause genetic defects.
H350	May cause cancer.
H314	Causes severe skin burns and eye damage.
H301 + H331	Toxic if swallowed or if inhaled.
Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated

	clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
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

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : 3-Bromo-1-propene

Formula : C3H5Br
Molecular weight : 120,98 g/mol
CAS-No. : 106-95-6
EC-No. : 203-446-6

Component		Classification	Concentration
3-bromo-1-propene			
CAS-No. EC-No.	106-95-6 203-446-6	Flam. Liq. 2; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; H225, H301, H331, H314, H318, H400 M-Factor - Aquatic Acute: 10	<= 100 %
propylene oxide Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No. Index-No.	75-56-9 200-879-2 CH-L3-A008	Flam. Liq. 1; Acute Tox. 4; Acute Tox. 3; Eye Irrit. 2; Muta. 1B; Carc. 1B; STOT SE 3; H224, H302, H331, H311, H319, H340, H350, H335	<= 0,1 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

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
Hydrogen bromide gas
Combustible.
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: Avoid inhaling vapours and aerosols, and prevent direct contact with the substance. Ensure there is sufficient ventilation, and keep a safe distance from heat sources and potential ignition points.
- In case of an emergency, evacuate the affected area, follow emergency protocols, and seek guidance from an expert. Refer to Section 8 for information on personal protective equipment.

6.2 Environmental Precautions:

- Prevent the product from entering drainage systems, as there is a risk of explosion**.**

6.3 Methods and Materials for Containment and Cleanup:

- Cover drains to prevent product entry. Collect, secure, and pump off any spills. Comply with any potential material restrictions (see sections 7 and 10). Use absorbent materials suitable for liquids to clean up. Dispose of waste properly and clean the affected area.

6.4 Reference to Other Sections:

- For disposal instructions, please refer to Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion
Flash back possible over considerable distance.Container explosion may occur under fire conditions.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. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability
Recommended storage temperature
2 - 8 °C

Moisture sensitive. Light sensitive.

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

8.2 Exposure controls

Personal protective equipment

Eye/Face Protection:

Use eye protection equipment that has been tested and approved in accordance with relevant government standards, such as NIOSH (US) or EN 166 (EU). Wear tightly fitting safety goggles.

Skin Protection:

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

Body Protection:

Wear flame-retardant antistatic protective clothing.

Respiratory Protection:

Use Filter A (according to DIN 3181) for protection against vapors of organic compounds. The entrepreneur must ensure that respiratory protective devices are properly maintained, cleaned, and tested in accordance with the manufacturer's instructions. Document these measures adequately.

Control of Environmental Exposure:

Prevent the product from entering drainage systems, 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	liquid
b)	Color	No data available
c)	Odor	No data available
d)	Melting point/freezing point	Melting point/range: -119 °C - lit.
e)	Initial boiling point and boiling range	70 - 71 °C - lit.
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	Upper explosion limit: 7,3 %(V) Lower explosion limit: 4,4 %(V)
h)	Flash point	-1 °C - c.c.
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: No data available
m)	Water solubility	0,382 g/l at 25 °C - soluble
n)	Partition coefficient: n-octanol/water	No data available
o)	Vapor pressure	No data available
p)	Density	1,398 g/cm3 at 25 °C - lit.
	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

No data available

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) .
Contains the following stabilizer(s):
propylene oxide (<=0,1 %)

10.3 Possibility of hazardous reactions
Violent reactions possible with:
Exothermic reaction with:
Oxidizing agents
Alkali metals
Alkaline earth metals
Light metals
amides
Amines
Powdered metals

10.4 Conditions to avoid
May polymerize on exposure to light. Exposure to moisture. Exposure to air.
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
Acute toxicity estimate Oral - 200 mg/kg
(Calculation method)
LD50 Oral - Rat - male and female - 200 mg/kg
(OECD Test Guideline 401)
Acute toxicity estimate Inhalation - 4 h - 2,41 mg/l - vapor(Calculation method)

LC50 Inhalation - Rat - male and female - 4 h - 2,41 mg/l - vapor

(OECD Test Guideline 403)
Acute toxicity estimate Dermal - > 2.000 mg/kg
(Calculation method)

Skin corrosion/irritation
Skin - Rabbit
Result: Causes burns.

(OECD Test Guideline 404)

Serious eye damage/eye irritation
Remarks: Causes serious eye damage.

Respiratory or skin sensitization
Freund's complete adjuvant 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
Method: US-EPA
Result: positive

Test Type: Micronucleus test
Species: Mouse

Application Route: Oral
Method: US-EPA
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

- Headache
- Drowsiness
- Unconsciousness
- Cardiovascular
- disordersnarcosis

Absorption may result in damage of the following:

- Liver
- Kidney

Other dangerous properties cannot be excluded.

This substance should be handled with particular care.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	static test LC50 - Carassius auratus (goldfish) - 0,8 mg/l - 24 h Remarks: (ECHA)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata - 0,087 mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability	Result: - Readily biodegradable. Remarks: (External MSDS)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Biological effects:
Forms toxic mixtures in water, dilution measures notwithstanding.
Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1099 IMDG: 1099 IATA: 1099

14.2 UN proper shipping name

ADR/RID: ALLYL BROMIDE
IMDG: ALLYL BROMIDE
IATA: Allyl bromide
Passenger Aircraft: Not permitted for transport
Cargo Aircraft: Not permitted for transport

14.3 Transport hazard class(es)

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

14.4 Packaging group

ADR/RID: I IMDG: I IATA: I

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user

Tunnel restriction code : (C/E)

Further information : No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : propylene oxide

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : propylene oxide

National legislation

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

: ENVIRONMENTAL HAZARDS

: 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

For this product a chemical safety assessment was not carried out

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