1-Propene, 3-chloro- (cas 107-05-1) MSDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name : Allyl chloride
Product Number : 481378
Brand : 
Index-No. : 602-029-00-X
CAS-No. : 107-05-1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
- Flammable liquids (Category 2)
- Carcinogenicity (Category 2)
- Germ cell mutagenicity (Category 2)
- Acute toxicity, Inhalation (Category 4)
- Acute toxicity, Dermal (Category 4)
- Acute toxicity, Oral (Category 4)
- Specific target organ toxicity - repeated exposure (Category 2)
- Eye irritation (Category 2)
- Specific target organ toxicity - single exposure (Category 3)
- Skin irritation (Category 2)
- Acute aquatic toxicity (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Highly flammable. Limited evidence of a carcinogenic effect. Possible risk of irreversible effects. Harmful by inhalation, in contact with skin and if swallowed. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]
Pictogram

\[-481378\]

Signal word
Danger

Hazard statement(s)
- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.
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

Hazard symbol(s)
R-phrase(s)
R1  Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R68 Possible risk of irreversible effects.
R50 Very toxic to aquatic organisms.

S-phrase(s)
S16 Keep away from sources of ignition - No smoking.
S25 Avoid contact with eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37 Wear suitable protective clothing and gloves.
S46 If swallowed, seek medical advice immediately and show this container or label.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards
Lachrymator.

3. COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substances
Synonyms : 3-Chloro-1-propene
Formula : C3H5Cl
Molecular Weight : 76.52 g/mol

4. FIRST AID MEASURES
4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

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

5. FIREFIGHTING MEASURES
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Further information
Use water spray to cool unopened containers.

6. **ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 **Methods and materials for containment and cleaning up**
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 **Reference to other sections**
For disposal see section 13.

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7. **HANDLING AND STORAGE**

7.1 **Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

7.2 **Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Recommended storage temperature: 2 - 8 °C

7.3 **Specific end uses**
no data available

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Control parameters**
Components with workplace control parameters

8.2 **Exposure controls**
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**Personal protective equipment**

**Eye/face protection**
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 **Information on basic physical and chemical properties**

a) **Appearance** Form: clear, liquid
Colour: colourless

b) **Odour** no data available
c) Odour Threshold  
   no data available

d) pH  
   no data available

e) Melting point/freezing point  
   Melting point/range: -130 °C - lit.

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f) Initial boiling point and boiling range  
   44 - 46 °C - lit.

g) Flash point  
   -32 °C - closed cup

h) Evaporation rate  
   no data available

i) Flammability (solid, gas)  
   no data available

j) Upper/lower flammability or explosive limits  
   Upper explosion limit: 11,2 % (V) 
   Lower explosion limit: 3,2 % (V)

k) Vapour pressure  
   393,577 hPa at 20 °C 
   1,418,532 hPa at 55 °C

l) Vapour density  
   2,64 - (Air = 1.0)

m) Relative density  
   0,939 g/cm3 at 25 °C

n) Water solubility  
   no data available

o) Partition coefficient: n-octanol/water  
   no data available

p) Autoignition temperature  
   no data available

q) Decomposition temperature  
   no data available

r) Viscosity  
   no data available

s) Explosive properties  
   no data available

t) Oxidizing properties  
   no data available

9.2 Other safety information  
   no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity  
   no data available

10.2 Chemical stability  
   no data available

10.3 Possibility of hazardous reactions  
   no data available

10.4 Conditions to avoid  
   Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5 Incompatible materials  
   Strong oxidizing agents Boron trifluoride, Sulfuric acid, Nitric acid, Strong oxidizing agents

10.6 Hazardous decomposition products  
   Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity  
LC50 Inhalation - rat - 4 h - 2100 ppm

Skin corrosion/irritation  
Skin - rabbit -

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Serious eye damage/eye irritation  
Eyes - rabbit -

Respiratory or skin sensitization  
no data available

Germ cell mutagenicity  
In vitro tests showed mutagenic effects

Carcinogenicity  
Limited evidence of carcinogenicity in animal studies
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (3-Chloro-1-propene)

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
May cause damage to organs.
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

- Inhalation: Toxic if inhaled. Causes respiratory tract irritation.
- Ingestion: Harmful if swallowed.
- Skin: Harmful if absorbed through skin. Causes skin irritation.
- Eyes: Causes serious eye irritation.

Signs and Symptoms of Exposure
spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonia, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

Additional Information
RTECS: UC7350000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 250 mg/l - 24 h

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 1100  
IMDG: 1100  
IATA: 1100

14.2 UN proper shipping name
ADR/RID: ALYL CHLORIDE  
IMDG: ALYL CHLORIDE  
IATA: Allyl chloride
Passenger 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

14.5 Environmental hazards
ADR/RID: yes
IMDG: I
IMDG Marine pollutant: yes
IATA: I

14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION
Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a
guide. The information this document is based on the present state of our knowledge and is applicable to the product with regard to
appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be
held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip
for additional terms and conditions of sale.