

Material Safety Data Sheet

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Version 1.5

According to 91/155/EEC

1 - Product and Company Information

Product Name	PROPARGYL ALCOHOL
Product Number	81820
Company	Sigma-Aldrich Pte Ltd #08-01 Citilink Warehouse Singapore 118529 Singapore
Technical Phone #	65 271 1089
Fax	65 271 1571

2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
PROPARGYL ALCOHOL	107-19-7	203-471-2	603-078-00-X
Formula	C3H4O		
Molecular Weight	56.06 AMU		
Synonyms	Acetylene carbinol * Agrisynth PA * Ethynylcarbinol * Methanol, ethynyl- * Propargyl alcohol (ACGIH:OSHA) * 1-Propyne-3-ol * 2-Propynyl alcohol * RCRA waste number P102		

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Flammable. Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

Unsuitable: Water may be effective for cooling, but may not effect extinguishment.

SPECIAL RISKS

Specific Hazard(s): Vapor may travel considerable distance to source of ignition and flash back. Flammable liquid.

Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions. Forms explosive mixtures in air.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SPECIFIC METHOD(S) OF FIRE FIGHTING

Use water spray to cool fire-exposed containers.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing.

STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat, sparks, and open flame.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath. Use nonsparking tools.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	3 mg/m ³
Poland		NDSCh	-
Poland		NDSP	

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	2.5 mg/m3 1 ppm

Remarks: H

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	5 mg/m3 2 ppm

Remarks: H

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	2.5 mg/m3 1 ppm

Remarks: H

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	2 mg/m3 1 ppm

Remarks: H

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	2.3 mg/m3 1 ppm
OEL	STEL	7 mg/m3 3 ppm

Remarks: Skin

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Liquid Color: Very faintly yellow-green Form: Clear liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	113 - 115 °C	
MP/MP Range	-53 °C	
Flash Point	33 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	0.949 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	1.93 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	

Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: Heat sensitive.

Conditions to Avoid: UV light

Materials to Avoid: Oxidizing agents, Strong acids, Strong bases, Amines, Phosphorous pentoxide, Isocyanate vapor.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: May occur Product may explode if polymerization is initiated in closed containers

11 - Toxicological Information

RTECS NUMBER: UK5075000

ACUTE TOXICITY

LD50
Oral
Rat
20 mg/kg

LC50
Inhalation
Rat
873 ppm
2H

LD50
Oral
Mouse
50 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity).
Lungs, Thorax, or Respiration:Dyspnea. Blood: Hemorrhage.

LC50
Inhalation
Mouse
2,000 mg/m3
2H
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Excitement. Lungs, Thorax, or Respiration:Dyspnea.

LD50
Skin
Rabbit
16 mg/kg
Remarks: Skin and Appendages:Skin: After systemic exposure:
Dermatitis, other

LD50
Oral
Guinea pig
60 mg/kg

LD50
Oral
Mammal
50 mg/kg

LC50
Inhalation
Mammal
3,000 mg/m3

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: Causes burns.
Skin Absorption: May be fatal if absorbed through skin. Readily absorbed through skin.
Eye Contact: Causes burns. Lachrymator.
Inhalation: May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion: May be fatal if swallowed.

TARGET ORGAN INFORMATION

Kidneys. Liver.

CHRONIC EXPOSURE - MUTAGEN

Hamster
400 UMOL/L
Cell Type: ovary
Cytogenetic analysis

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2929
Class: 6.1
PG: I
Proper Shipping Name: Toxic liquid, flammable,
organic, n.o.s.

IMDG

UN#: 2929
Class: 6.1
PG: I
Subrisk: 3
Proper Shipping Name: TOXIC LIQUID, FLAMMABLE,
ORGANIC, N.O.S.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2929
Class: 6.1
PG: I
Subrisk: 3
Proper Shipping Name: Toxic liquid, flammable,
organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 603-078-00-X

INDICATION OF DANGER: T N

Toxic. Dangerous for the environment.

R-PHRASES: 10 23/24/25 34 51/53

Flammable. Toxic by inhalation, in contact with skin and if
swallowed. Causes burns. Toxic to aquatic organisms, may cause
long-term adverse effects in the aquatic environment.

S-PHRASES: 26 28 36 45 61

In case of contact with eyes, rinse immediately with plenty of
water and seek medical advice. After contact with skin, wash
immediately with plenty of soap-suds. Wear suitable protective
clothing. In case of accident or if you feel unwell, seek
medical advice immediately (show the label where possible).
Avoid release to the environment. Refer to special
instructions/safety data sheets.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 2

SWITZERLAND

SWISS POISON CLASS: 3

NORWAY

Labelling for organic solvents where the package is 1liter or
more.

YL-tall m3/l: 190000

YL-group: 5

Safety phrases: 38 42 210

In case of insufficient ventilation, wear suitable respiratory

equipment. During fumigation/spraying wear suitable respiratory equipment. Use compressed air- or fresh air line breathing apparatus in confined spaces.

16 - Other Information

WARRANTY

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 in 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. Sigma-Aldrich Inc., 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. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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