

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

1 Chemicals and company identification

· Chemical

identification - Product name: Allyl Alcohol - _____

English name: · Synonyms/aliases: 2-propen-1-ol,
propenyl alcohol, allyl alcohol, ethylene methanol

2-Propenyl Alcohol, 1-propen-3-ol, Vinylcarbinol, 1-propen-1-ol

· CAS number:

107-18-6

· Recommended use of the chemical and

restrictions on use: · Identified/suggested uses

Raw materials for the following: Herbicides

Plasticizers Organic synthesis intermediates

Resins Manufacture of glycerin and acrolein Corporate identification

MIT-IVY INDUSTRY CO.,LTD

2-1402,OFFICE BUILDING 2, COMMERCIAL INNER STREET AND OFFICE 1,

SHIMAO PLAZE YUNLONG DISTRICT XUZHOUJIANGSU, CHINA 221100

TEL: 0086-13805212761 FAX:0086-0516-83769139

EMAIL:info@mit-ivy.com

2 Hazard overview

· Emergency overview:

colorless liquid fatal, vapor is heavier than air, Exposure to ignition sources may result in flashback. Mixing with air can form explosive gas. Inhalation or skin contact can irritate to skin and eyes, contact requires special first aid measures and medical follow-up. Highly toxic to aquatic organisms.

· GHS Hazard Category:

Flammable Liquid H225 Highly flammable liquid and vapor

Category 2 Acute Toxicity - Oral H301 Toxic if swallowed

Category 3 Acute Toxicity - H310 Fatal in contact with skin

Dermal Category 1 Acute Toxicity H330 Fatal if inhaled

- Inhalation Category 2 Skin H315 Causes skin irritation

Corrosion/Irritation Category 2 Serious H319 Causes serious eye irritation

Eye Damage/Eye Irritation Category 2A Specific Target Organ Toxicity -Single exposure

category 3 H335 May cause respiratory irritation harmful to the aquatic environment -Acute

hazard category 1 H400 Very toxic to aquatic life Hazardous to the aquatic environment -Long-term hazard category 3 H412 Harmful to aquatic life with long lasting effects

· Label elements

· Pictograms



GHS02 GHS06 GHS09

· Signal word Danger

· Hazard statements

Highly flammable liquid and vapour.

(continued on page 2)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 1)

Toxic if swallowed
Fatal in contact with skin
Fatal if inhaled
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Very toxic to aquatic life
Harmful to aquatic life with long lasting effects
Precautionary statements
Precautionary measures
Keep away from heat/sparks/open flames/hot surfaces. No Smoking
Containers and Loading Equipment Grounding/Equipotential Bonding
Use Explosion Proof Electrical/Ventilation/Lighting Equipment
Use Only Non-Sparking Tools
Take Measures to Prevent Electrostatic Discharge
Do Not Breathe Dust/Fume/Gas/Mist/Vapors/Spray
Keep Out of Eyes, contact with skin or clothes, wash thoroughly after operation, do not eat, drink or smoke when using this product, only use it outdoors or in a well-ventilated place to avoid release into the environment
Wear protective gloves/protective clothing/goggles/masks [In case of insufficient ventilation]
Wear respiratory protection
· Accident Response
IF SWALLOWED: Immediately call an emergency center/doctor
rinse mouth
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash skin with water/shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if worn and can be easily removed. Continue flushing. If you feel unwell, call a poison center or doctor. Urgent specific treatment (see on this label)
Immediately take off all contaminated clothing and wash before reuse
If skin irritation occurs: Get medical advice/attention
If eye irritation persists: Get medical advice/attention
In fire: Use carbon dioxide, powder or Extinguish with water-based spray. Collect spillage
· Safe storage
Keep in a well-ventilated place. Keep container tightly closed in a well-ventilated place. Keep cold in storage area
locked
Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

· Physical and chemical hazards
Highly flammable liquid and vapour, see chapters 9 and 10 for details.
· See Chapter 11 for details on health hazards.
Toxic if inhaled.
Environmental hazards
Very toxic to aquatic life. See Chapter 12 for details.
· Other hazards
No information known.

CN
(continued on page 3)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 2)

3 Composition/information on ingredients

· Pure

substance - Chemical Abstracts Service registration number (CAS No.), name of hazardous component, concentration or concentration range (ingredient percentage): 107-18-6 Allyl alcohol 99.8%

4 first aid measures

· Description of first aid

measures · General First

aiders need to protect themselves.

Take off contaminated clothing

immediately. · Inhalation: Supply fresh

air or oxygen; call a physician. In case of

unconsciousness, place patient on side until transport. · Skin contact:

Wash affected part of body with soap and water. If skin irritation persists,

consult a physician. · Eye contact: Flush open eyes with water for 15

minutes. If eye irritation develops or persists, consult a physician

immediately. · After swallowing: Rinse mouth and drink plenty of water. Do not induce vomiting; seek medical attention immediately.

· Most important symptoms and effects, both health and well: Irritating effects Headache Nausea and vomiting Shortness of breath

may cause respiratory disturbances. Unconsciousness · Advice to protect rescuers: First aid should be performed in a safe area

while wearing Class C protective equipment. · Notes to Physician: Monitor circulation. If swallowed, perform gastric lavage with

supplemental activated charcoal. Treatment of exposure should be symptomatic and appropriate to patient's clinical condition.

5 Firefighting measures

· Extinguishing

media: water

mist anti-alcohol foam fire

extinguishing agent dry powder

carbon dioxide Take appropriate

fire extinguishing measures according to the prevailing situation and surrounding

environment. · Unsuitable fire extinguishing media Avoid using direct flow of water to

extinguish the fire Direct flow of water may cause flammable liquid to splash and

spread the fire. · Special hazards Combustible. Forms explosive mixtures with air at

elevated temperatures. Beware of flashback. Vapors are heavier than air and may spread

along the ground. During heating or in case of fire, toxic gases are produced.

(continued on page 4)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 3)

· Precautions and protective measures for

fire-fighting · Special protective equipment for

firefighters: wear positive pressure self-contained breathing apparatus (SCBA). Wear protective firefighting clothing (including fire helmet, coat, trousers, boots, gloves). · Additional information Do not breathe explosive or combustion gases. Avoid contact with skin, eyes and clothing.

Sprinkle with water to keep fire containers cool until fire fighting is complete Collect contaminated firefighting water individually. Do not allow it to drain into the sewage system.

6 Leakage emergency treatment

· Personal precautions, protective equipment and emergency

procedures Wear protective equipment. Keep unprotected people away. Stop the flow of material if possible. Ensure proper ventilation.

Do not breathe dust/fume/gas/mist/vapors/spray. Use respiratory protection to avoid exposure to fumes/dust/aerosols. Keep away from ignition sources. Make sure cleanup is done by trained personnel. ·

Environmental Precautions: Do not allow product to come into contact with sewage system or any water source. In case of seepage into water source or sewage system, notify the relevant authorities. Dilute with plenty of water.

Disposal material: Absorb liquid binding material (sand, diatomaceous earth, acid binder, universal binder, sawdust). Allow to solidify. Lift up using machinery. For larger liquid spills (greater than 1 drum), transferred by mechanical means such as vacuum trucks to rescue tanks for recovery or safe

disposal. Ensure adequate ventilation. Dispose of contaminated material according to section 13. ·

Small spills: Absorb spilled liquid with absorbent material such as paper, cloth, sawdust, oil

absorbent pads. Ventilate the area. · Large spill: Ventilate area. Dispose of after embankment containment. For larger spills (greater than 1 drum), transfer by mechanical means such as vacuum trucks to rescue tanks for recovery or safe disposal. Flush the remaining spilled material from the spill area with plenty of water and detergent, and it is recommended to recycle the cleaning water for disposal.

· Precautions against secondary hazards

Clean contaminated surfaces thoroughly after

treatment. Make sure to remove any ignition source at the site of the leakage area, and adequately ventilate the site to avoid secondary accidents.

7 Handling and storage

· Handling ·

Precautions for safe handling:

Use required personal protective equipment wear protective gloves/protective clothing/goggles/face protection. Ensure good ventilation/exhaust in workplace. Open and handle receptacles with care. Avoid formation of aerosols. · Technical measures for protection against fire and explosion: General fire protection measures. Keep away from heat/sparks/open flames/hot surfaces. No smoking to prevent static electricity.

(continued on page 5)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 4)

Provide respiratory

protection. · Storage: ·

Conditions for safe storage :

Store in tightly closed receptacles in a cool, dry place. Provide receptacles with ventilation. · Precautions for storage: Not required.

· Further information on storage conditions: Keep container tightly closed. Keep out of heat and direct sunlight.

8 Exposure controls and personal protection

· Engineering Controls:

Some operations may require local exhaust ventilation.

Use local exhaust ventilation or other engineering controls to keep airborne concentrations below established exposure limits.

Technical measures and proper procedures should take precedence over the use of personal protective equipment.

· Allowable

Concentration ·	
Occupational Exposure	
Limit 107-18-6 Allyl Alcohol	OEL PC-STEL: 3 mg/m ³ PC-TWA: 2 mg/m ³ Pi Biological limit value: No further relevant information

available. · Monitoring methods: No information

available. · Personal protective equipment: · General

protective and hygienic measures: When handling

chemicals, general precautions should be followed.

Keep away from food, drink and feed. Remove immediately all unclean and contaminated clothing. Before breaks and after work Wash hands afterwards.

Store protective clothing separately. Avoid contact with eyes and skin. Wash

skin thoroughly after work and before breaks . Infectious measures cannot

maintain airborne concentrations below recommended exposure limits (if

established) or acceptable levels (in countries where exposure limits have not

been established), and approved respirators must be worn. In case of brief exposure or in

situations of low contamination, use a filtered respiratory device. In case of deep or

prolonged exposure, use self-contained respiratory protection.

· Hand protection:



protective gloves

The selected protective gloves must comply with standard EN374 or equivalent. Change gloves

as soon as you notice any tearing or changes in appearance (size, color, dexterity, etc.). The material of the glove must be impermeable

and resistant to the product/substance/additive. When selecting a glove material, please pay attention to the penetration time, percolation

rate and degradation parameters of the material. Selecting the right glove depends not only on the material, It also depends on the quality

characteristics, and which manufacturer it is from. Penetration time of glove material Please obtain the exact break time from the labor protection glove manufacturer and

observe the actual break time

(continued on page 6)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 5)

· Eye protection:



sealed goggles

Safety glasses for side shields comply with EN166, ANSI87.1-2010, or equivalent.

· Skin and body protection: Flame

retardant antistatic protective

clothing The type of protective equipment must be selected according to the amount and concentration of hazardous substances in a particular workplace.

9 physical and chemical properties

· Information on basic physical and chemical properties

· General description · Appearance and properties State,

shape: color:

Liquid

clear

colorless

Odor: Odor

irritating tearing eyes undecided.

threshold pH:

undecided.

Change of state

Melting point/

freezing point: -129 °C Boiling point, initial boiling

point and boiling range: 96.9 °C Flash point: 21-22

°C (Closed Cup) Flammability (solid, gas): Not applicable Ignition temperature:

Decomposition temperature:

378 °C Not

determined.

· Autoignition

The product is not

temperature: · Explosion

spontaneously combustible. The product is not explosive however may form explosive air/vapor mixtures

hazard: · Explosion limit:

Lower explosion 2.5 Vol % 18 Vol

limit: Upper explosion % 24 mm Hg

limit: · Vapor pressure at 20 °C:

0.854 g/cm³ Not

Density:

determined.

Relative Density:

Vapor Density :

2 (Air=1)

Evaporation Rate

Undecided.

· Soluble

water:

Fully mixable Partition

coefficient n-octanol/water: Not determined. Viscosity : Dynamic:

Kinematic: Organic solvents:

Undecided.

Undecided.

99.8 %

Product Name: Allyl Alcohol

(continued on page 6)

10 Stability and reactivity

· **Stability** The product is stable under specified conditions of use and storage. ·
Hazardous reactions Polymerization may occur when heated above 100 °C. Risk of
 explosion with: strong oxidizing agents · **Conditions to avoid** Exposure to light.
 Protect from heat, keep away from fire and avoid static electricity. · **Incompatibility:**
 strong acids. strong base. Strong oxidizing agent carbon tetrachloride fuming
 potassium diallyl phosphate tribromide melamine tribromide **Hazardous decomposition**
 products: combustible gases/steams carbon monoxide (CO) and carbon dioxide
 (CO₂) **Decomposition products** depend on temperature, air and others matter of
 existence.

11 Toxicological Information

· **Information on toxicological effects** · **Acute toxicity:** Toxic if swallowed Fatal in contact with skin Fatal if inhaled
Numerical measure of toxicity

(eg acute toxicity estimate): 107-18-6 Allyl alcohol Oral

LD50 64 mg/kg (rat) Dermal LD50 45 mg/kg (rabbit)

Skin irritation or corrosion: Causes skin irritation

Rabbit: Skin irritation (OECD 404) Eye irritation or

corrosion: Causes serious eye irritation **Rabbit:** Eye irritation (OECD 405) **Respiratory or skin sensitization:**

Based on the available data, the criteria for classification cannot be met. · **Germ cell mutagenicity:**

Based on available data, the criteria for classification are not met. **Genotoxicity in vitro (mammalian cells):**

Negative (OECD 476) **Genotoxicity in vivo (mammalian):** Negative (OECD

478) · **Carcinogenicity:** Based on available data, the conditions for

classification are not met. · **Reproductive toxicity:** Based on available data,

the criteria for classification are not met. · **Specific target organ toxicity**

(single exposure): Causes respiratory irritation. Inhalation of vapor or mist

may irritate the respiratory system. **Minimum Adverse Effect Level (LOAEL):**

40 ppm

(continued on page 8)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 7)

No Observed Adverse Effect Level (NOAEL): 20 ppm Specific
target organ toxicity (repeated exposure): Based on available data, the criteria for classification are not met. -
Aspiration hazard: Based on available data, the criteria for classification are not met. Based on the physical
properties of the substance, this product is not an aspiration hazard. - Primary irritant effects: - Skin irritation
or corrosion: Irritating skin and mucous membranes. - Eye irritation or corrosion: Irritating effects. - Respiratory
or skin sensitization: No sensitizing effects known. - Further toxicological information: - Toxicokinetic, metabolism
and distribution information No relevant details available.

12 Ecological information

- Ecotoxicity
- Aquatic
toxicity: Harmful to aquatic life with long
lasting effects Very toxic to aquatic life

107-18-6 Allyl alcohol EC50/48h 1.65 mg/

I (invertebrates) (OECD Guideline 202)

LC50/96h 0.589 mg/l (fish) (OECD Guideline 203)

- Persistence and
degradability Biodegradable
O2 Consumption: 86% (14d, OECD Guideline 301C)
- Bioaccumulative potential
Bioaccumulation potential is low (BCF < 100 or Log Pow < 3). Bioconcentration
Index (BCF) = 3.162 L/kg (QSAR) - Mobility in soil The potential for mobility in
soil is very high (Koc between 0 and 50).

Log Koc: 0.608 (QSAR) Henry's
constant (H) : 4.99x10E-6 atm m³ Ecotoxic effects:

Remarks : Very toxic to fish Additional ecological
information: General notes: Do not allow contact
with this product Ground water, water courses or
sewage systems. Risk to drinking water if even
small quantities of product penetrate into the ground. Very
toxic to organic matter in water. - Other side effects No further relevant
information available.

13 Disposal disposal

- Disposal of
chemicals: - Advice:
After prior treatment of the product, it must be placed in an incinerator for waste disposal in accordance with the regulations on disposal of
particularly hazardous waste. Do not dispose of with household waste, garbage or other solid waste. Do not flow into Sewer. Any disposal method
should be in accordance with national/regional/provincial/local regulations.
- Contaminated containers and
packaging: - Disposal considerations:
Thoroughly remove contaminated packaging. Can be recycled after thorough and proper cleaning.

(continued on page 9)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 8)

Empty containers may still contain hazardous residues. Must be disposed of in accordance with official regulations. Recommended cleaning agents: Clean with water and detergent if necessary.

14 Shipping Information

- United Nations Dangerous Goods Number (UN Number)
- ADR, IMDG, IATA **UN1098 · Proper**

shipping name

- ADR 1098 Allyl alcohol, harmful to the environment
- IMDG **ALLYL ALCOHOL, MARINE POLLUTANT**
- IATA **ALLYL ALCOHOL**

· United Nations Hazard Classification

- ADR



- Class 6.1 Toxic
- Packaging mark substances 3+6.1

· IMDG



- Class 6.1 Toxic
- Label substances 3/6.1

· IATA



- Class 6.1 Toxic
- Label substances 3 (6.1)

· Packaging category

- ADR, IMDG, IATA I · **Environmental**

hazard · Marine pollutant (yes/no): This product contains an environmentally harmful raw material: Allyl alcohol
yes

Symbols (fish and tree)

Special markings (ADR): Symbol (fish and tree) Special precautions for user **WARNING: Toxic substance Hazard number: 336**

- EMS number: FE,SD

Dangerous cargo stowage category: D

- Stowage Code **SW2 Clear of living quarters.**

(continued on page 10)

According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 9)

Shipping/Additional Information:

· ADR ·

Limited Quantity (LQ) 0
· Exceptional Quantity (EQ) code: E0
Not permitted as Excepted Quantity 1

· Transport

category · Tunnel restriction code C/D

· IMDG

Limited Quantity (LQ) 0
· Exceptional Quantity (EQ) Code: E0 Not
permitted as Excepted Quantity UN 1098 Allyl Alcohol,

· UN "Standard

3 (6.1), I, Hazardous to the environment The relevant regulations

Regulations": · Transport Precautions of ICAO, IMDG, RID, ADR, ADN must be complied with during transportation. Verify that the

driver understands the potential hazards of the cargo being loaded and knows what to do in the event of an accident and
emergency. Carry protective equipment and a fire extinguisher.

15 Regulatory Information

· Regulations/regulations specific to the safety, health and environment of this

substance or mixture This chemical safety data sheet complies with the following relevant national standards: GB16483, GB13690, GB6944, GB/T15098,
GB18218, GB15258, GB190, GB191, GB12268, GBZ 2.1-2019, GB30000.2-29 and related regulations: "Dangerous Goods Transport Management Rules",

"Hazardous Chemicals Safety Management Regulations", United Nations Recommendations on the Transport of Dangerous Goods (UN TDG for short). ·

Regulations on the Safety Management of Hazardous Chemicals · Substances are listed in the Inventory of Existing Chemical Substances in China (IECSC) .

16 Other Information**Abbreviation: ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road****IMDG: International Maritime Code for Dangerous Goods****IATA: International Air Transport Association****CAS: Chemical Abstracts Service, division of the American Chemical Society****LC50: Lethal concentration, 50 percent****LD50: Half lethal dose (Lethal dose, 50 percent)****Flammable liquid Category 2: Flammable liquids –****Category 2 Toxicity - Inhalation Category 2: Acute****toxicity – Category 2 Skin corrosion/irritation Category****2: Skin corrosion/irritation – Category 2 Serious eye****damage/eye irritation Category 2A: Serious eye damage/eye****irritation – Category 2A Specific target organ toxicity - single Exposure Category 3:****Specific target organ toxicity (single exposure) – Category 3 Hazardous to the aquatic environment -****acute aquatic hazard – Category 1 Hazardous to the aquatic environment - acute aquatic hazard – Category 1****Hazardous to the aquatic environment - long-term hazard Category 3: Hazardous to the aquatic environment - long-term****aquatic hazard – Category 3 · Data source Catalog of Hazardous Chemicals (2015 Edition) Implementation Guide United****Nations "Globally Harmonized System of Classification and Labeling of Chemicals" United Nations "Model Regulations****Recommendations on the Transport of Dangerous Goods" Most toxicological and Ecotoxicological data were obtained****from the public communication website of the European Chemical Agency (ECHA). [https://echa.europa.eu/information-](https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/54703)****[on-chemicals/cl-inventory-database/-/discli/details/54703](https://echa.europa.eu/registration-dossier/-/registered-dossier-16042) [https://echa.europa.eu/registration-dossier/-/registered-dossier-](https://echa.europa.eu/registration-dossier/-/registered-dossier-16042)****16042**

(continued on page 11)

— CN —



According to GB/T 16483-2008, GB/T 17519-2013

Revision date 2022.02.14

Product Name: Allyl Alcohol

(continued on page 10)

· **Compilation and revision information:**

Compilation date:

2017-11-02 Revision date: 2022-02-14 Guidelines" (GB/T17519-2013) standard preparation. · **Disclaimer:** All users/customers/recipients are advised to study this Safety Data Sheet (SDS) carefully and understand all data or any potential hazards associated with this product. Consult appropriate specialists if necessary. This message is from a bona fide offer period. This material safety data sheet does not provide any guarantee. It is the customer's/user's responsibility to ensure that they use this product in compliance with local/regional/state/provincial/national laws; regulatory requirements and standards. Customers/operators should be diligent to ensure that they are in the control of Dalian Group. Dalian Group will not be responsible for the chemical safety data sheets obtained from other places. If you are not sure whether the material safety data sheet in hand is the latest version or obtained from other sources, please contact us to obtain the latest version.

— CN —