

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 11/10/2008

Reviewed on 11/10/2008

1 Identification of substance:

Product details:

Product name: Allyl alcohol

Stock number: 30708

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
 Johnson Matthey Catalog Company, Inc.
 30 Bond Street
 Ward Hill, MA 01835-8099
 Emergency Phone: (978) 521-6300
 CHEMTREC: (800) 424-9300
 Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.
 After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Allyl alcohol (CAS# 107-18-6), 100%

Identification number(s):

EINECS Number: 203-470-7

Index number: 603-015-00-6

3 Hazards identification

Hazard description:



T Toxic

N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 10 Flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 50 Very toxic to aquatic organisms.

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	3
FIRE	3
REACTIVITY	1

Health (acute effects) = 3

Flammability = 3

Reactivity = 1

4 First aid measures

General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing

Do not induce vomiting; immediately call for medical help.

Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide (CO)

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Keep away from ignition sources.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling**Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

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Information about protection against explosions and fires:

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

Information about storage in one common storage facility:

Do not store together with oxidizing and acidic materials.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Allyl alcohol

	ppm
ACGIH TLV	2; 4-STEL (skin)
Austria TWA	2 (skin)
Belgium TWA	2; 4-STEL (skin)
Denmark TWA	2 (skin)
Finland TWA	2; 4-STEL (skin)
France TWA	2; 4-STEL (skin)
Germany TWA	2
Hungary TWA	3; 6-STEL (skin)
Ireland TWA	2; 4-STEL (skin)
Netherlands TWA	2 (skin)
Poland TWA	2; 10-STEL (skin)
Russia TWA	1
Sweden TWA	2; 6-STEL (skin)
Switzerland TWA	2; 4-STEL (skin)
United Kingdom TWA	2; 4-STEL (skin)
USA PEL	2 (skin)

Additional information: No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves**Eye protection:** Safety glasses

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Body protection: Protective work clothing.

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9 Physical and chemical properties:

General Information	
Form:	Liquid
Color:	Colorless
Odor:	Pungent
Change in condition	
Melting point/Melting range:	-129°C (-200°F)
Boiling point/Boiling range:	96-98°C (205-208°F)
Sublimation temperature / start:	Not determined
Flash point:	22°C (72°F)
Ignition temperature:	378°C (712°F)
Decomposition temperature:	Not determined
Explosion limits:	
Lower:	2.5 Vol %
Upper:	18.0 Vol %
Vapor pressure at 20°C (68°F):	22.6 hPa (17 mm Hg)
Density at 20°C (68°F):	0.854 g/cm ³
Solubility in / Miscibility with Water:	
	Fully miscible

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Acids
Oxidizing agents
Alkali metals
Aluminum/aluminum alloys.
Magnesium

Dangerous reactions No dangerous reactions known

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral	LD50	96 mg/kg (mouse)
		64 mg/kg (rat)
		71 mg/kg (rabbit)
Dermal	LD50	45 mg/kg (rabbit)
Inhalative	LC50/2H	500 mg/m ³ /2H (mouse)

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Irritation of eyes	LC50/8H	76 ppm/8H (rat)
	severe	25 ppm/2H (human)
		20 mg (rabbit)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Other information (about experimental toxicology):

Mutagenic effects have been observed on tests with bacteria.

Subacute to chronic toxicity:

Allyl alcohol is strongly irritating to the skin, eyes and mucous membranes. Symptoms of exposure include nausea, headache, shortness of breath and coughing. Exposure may also result in kidney and liver damage. Readily absorbed through the skin.

May cause photosensitivity. Exposure to light can result in allergic skin reactions such as edematous swelling and dermatitis. May cause discoloration of the skin.

Additional toxicological information:

Danger through skin absorption.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**Ecotoxicological effects:**

Remark: Very toxic for fish

General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Do not allow material to be released to the environment without proper governmental permits.

Very toxic for aquatic organisms

13 Disposal considerations**Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

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14 Transport information

DOT regulations:



Hazard class: 6.1
Identification number: UN1098
Packing group: I
Hazardous substance: 100 lbs, 45.4 kg
Poison inhalation hazard: Yes
Proper shipping name (technical name): ALLYL ALCOHOL
Label: 6.1+3

Land transport ADR/RID (cross-border)



ADR/RID class: 6.1 (TF1) Toxic substances
Danger code (Kemler): 663
UN-Number: 1098
Packaging group: I
Description of goods: 1098 ALLYL ALCOHOL

Maritime transport IMDG:



IMDG Class: 6.1
UN Number: 1098
Label: 6.1+3
Packaging group: I
Proper shipping name: ALLYL ALCOHOL

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 6.1
UN/ID Number: 1098
Label: 6.1+3
Packaging group: I
Proper shipping name: ALLYL ALCOHOL

USA

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15 Regulations**Product related hazard informations:****Hazard symbols:**

T Toxic

N Dangerous for the environment

Risk phrases:

10 Flammable.

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

50 Very toxic to aquatic organisms.

Safety phrases:

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

38 In case of insufficient ventilation, wear suitable respiratory equipment.

45 In case of accident or if you feel unwell, seek medical advice immediately.

61 Avoid release to the environment. Refer to special instructions/ Safety data sheets

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Information about limitation of use:

For use only by technically qualified individuals.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Paul V. Connolly