



ETHIMEX Ltd
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United Kingdom

Material Safety data Sheet

Product Name: Organic Alcohol min 96%
Synonyms: Ethyl Alcohol
Methylcarbinol
C.A.S. Number: 64-17-5
Chemical Formula: CH₃ – CH₂ – OH
Product Carcinogenic according to N.T.P. only
PRODUCT IS HAZARDOUS ACCORDING TO OSHA (1910.1200)

1. Hazard identification

1.1 Emergency overview

Appearance: Clear liquid
Odour: Alcohol odour

WARNING STATEMENT

FLAMMABLE LIQUID AND VAPOR
MAY CAUSE DIZZINESS AND DROWSINESS
MAY CAUSE EYE AND SKIN IRRITATION
ASPIRATION HAZARD IF SWALLOWED
CAN ENTER LUNGS AND CAUSE DAMAGE
FOR INDUSTRIAL USE ONLY
CAN CAUSE LIVER DAMAGE

HMIS		NFPA	
Health: 2	Reactivity: 0	Health: 1	Reactivity: 0
Lammability: 2	Special: 0	Flammability: 3	Special: 0

Potential health effects:

	Eye	Skin	Inhalation	Ingestion
Primary Route of Exposure	x	x	x	x

1.2 Effects of overexposure

Acute

Eyes

Vapour may cause irritation, experienced as discomfort, with excess tear production and blinking, and seen as excess redness of the eye. Liquid may cause more severe irritation and possible corneal injury.

Skin

May cause irritation with discomfort, and seen as local redness and possible swelling. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort.

Other than the potential skin irritation effects noted above, acute (short term) adverse effects are not expected from brief skin contact: see other effects, below, and section 11 for information regarding potential long term effects.

Prolonged, widespread, or repeated skin contact may result in the absorption of potentially harmful amounts of material.

Ingestion

May cause abdominal, nausea and diarrhoea. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Sensitization properties

Unknown

Inhalation

Vapours or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or as from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headache, nausea and drowsiness.

Inhalation may cause dizziness, drowsiness, euphoria, loss of coordination, disorientation, headache, nausea and vomiting. In poorly ventilated areas or confined spaces, unconsciousness and asphyxiation may result. Prolonged or repeated overexposure may result in the absorption of potentially harmful amounts of material.

Chronic

Prolonged and repeated overexposure to ethanol vapour may cause headache, lack of coordination, sleepiness, fatigue and difficulty concentrating. Repeated ingestion of ethanol can result in alcohol abuse and cause behavioural changes, memory loss, impaired judgement, decreased appetite, abdominal pain, muscle tremors, difficulty walking, irregular heartbeat and decreased fertility. Chronic alcohol abuse may also result in damage to the nervous system, liver, stomach and heart as well as cancers of the mouth, pharynx, larynx, esophagus and liver in humans. Ethanol abuse in pregnant

women can cause miscarriage, premature birth and low birth weight and birth defects (Fetal Alcohol Syndrome).

Medical Conditions Aggravated by Exposure

Repeated overexposure may aggravate existing liver disease. Because of its defatting properties, prolonged and repeated skin contact aggravates an existing dermatitis (skin conditions).

Other remarks

Ethyl alcohol is rapidly taken up after ingestion. Initial symptoms of acute intoxication include excitement, behavioural changes, slurred speech, dizziness, staggering, difficulty walking, irritability, drowsiness, sleepiness, stupor and coma. Facial flushing, dilated pupils, sweating, nausea and vomiting may also occur.

2. First aid measures

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.

Skin

Wash skin with plenty of soap and water until all traces of material are removed. Remove and clean contaminated clothing and shoes. Get medical attention if skin irritation persists or skin contact has been prolonged.

Ingestion

If person is conscious and can swallow, give two glasses of water (16 oz) but do not induce vomiting. If vomiting occurs, give fluids again. Have medical personnel determine if evacuation of stomach or induction of vomiting is necessary. Do not give anything by mouth to an unconscious or convulsing person.

Inhalation

If inhaled, remove to fresh air. If not breathing, clear person's airway and give artificial respiration. If breathing is difficult, qualified medical personnel may administer oxygen. Get medical attention immediately.

Other instructions

Aspiration of this product during induced emesis may result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubations. Contact a Poison Centre for additional treatment information.

3. Fire fighting measures

Ignition Temperature – AIT (degrees C):	363
Flash Point (degrees F):	17 (TCC)
Flammable limits (%):	Lower 3.3, Upper 19

Recommended fire Extinguishing Agents And Special Procedures

Water may be ineffective on flames but should be used to cool fire – exposed containers and provide protection for persons attempting to stop the leak. Use water spray, dry chemical, alcohol resistant foam or carbon dioxide to extinguish fire.

Unusual or Explosive hazards

Danger! Flammable materials may release vapours that travel long distances, ignite and flash back. Containers may explode in fire. Do not expose to heat, sparks, flame or other sources of ignition.

Use alcohol –compatible foam. Flame is invisible in daylight.

Special Protective Equipment for Fire-fighters

Wear full protective clothing and positive pressure breathing apparatus.

4. Accidental release measures (Transportation Spills: Chemtrec (800)4249300)

Procedures in Case of Accidental Release, Breakage or Leakage:

- Eliminate all ignition sources including internal combustion engines and power tools
- Ventilate area
- Barricade the immediate hazard area
- Stay upwind and warn of possible downwind explosion hazard. Avoid breathing vapour
- Avoid contact with skin, eyes or clothing
- Pressure demand air supplied respirators should always be worn when the airborne concentration of the contaminant or oxygen is unknown
- Otherwise wear respiratory protection and other personal protective equipment as appropriate for the potential exposure hazard. Contain spill if possible.
- Remove with inert absorbent
- Prevent entry into sewers and waterways

5. Handling and storage

5.1 Handling

- Hepatics and alcoholics must not work in ethanol environment
- Avoid contact with skin, eyes or clothing
- Wear gloves and glasses
- Do not breath alcohol vapour
- Do not manipulate next to oxidant material
- Transhipment by compressed air is forbidden

5.2 Storage

- Store in ventilated place
- Keep away from heat, sparks, flame and other sources of ignition
- Ground and bond shipping container, transfer line and receiving container
- Use spark proof tools. Material may be at elevated temperatures and/or pressures. Exercise care when opening bleeders and sampling ports.

5.4 Containers to be avoided
Aluminium

6. Exposure controls/personal protection

Protective equipment (Type)

Eye/face protection

Avoid eye contact. Chemical type goggles should be worn. Do not wear contact lenses.

Skin protection

Protective clothing such as coveralls or lab coats should be worn. Launder or dry-clean when soiled. Gloves and boots resistant to chemicals and petroleum distillates required.

Respiratory protection

Airborne concentrations should be kept to lowest levels possible. If vapour, mist or dust is generated and the occupational exposure limit of the product or any component of the product is exceeded use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

Ventilation

Use explosion –proof equipment to maintain adequate ventilation to meet occupational exposure limits, if applicable (see below), prevent accumulation of explosive air –gas mixtures, and avoid significant oxygen displacement. Oxygen levels should be at least 19.5% in confined spaces or other work areas (OSHA value)

Exposure limit for total product

VLE: 5 000 ppm (9 500 mg/m³)

VME: 1 000 ppm (1900 mg/m³)

7. Physical and chemical properties

7.1 Aspect

Physical aspect at 20deg C

Volatile and hygroscopic liquid

Colour

Colourless

Odour

Characteristic, alcohol odour

7.2 Temperature

Melting temperature:

- 112 deg C

Distillation temperature:

78 deg C

Flash point:

13 deg C (closed cup)

Ignition temperature

371 deg C

7.3 Characteristics

Flammable limits:

Lower limit: 3,3%, Upper Limit 19%

Vapour pressure

At 20 deg C: 5.85 Kpa

At 34.9 deg C: 13.3 Kpa

At 63.5 deg C: 53.3 Kpa

Vapour density (air = 1)	1.59
Density at 20 deg C:	0.789 g/cm ³
Solubility:	Water Alcohols Ether Most of organic solvents
Coefficient n- octanol/eau	log P = - 0.82/-0.66
Viscosity	1cSt at 20 deg C

8. Stability and Reactivity

8.1 Stability

Chemical stable at regular conditions of industrial uses.

8.2 Reactivity

- Violent reaction with strong oxidizers such as nitro – chemicals, sulfochromics, nitric acid, perchlorates and peroxides
- Reaction with alkalines metals may produce hydrogen
- Reaction with silver or mercury nitrate, fulminates, considered as explosives, are produced
- Light oxidation produces mainly aldehydes
- combustion produces carbon dioxide

9. Toxicological information (animal toxicity data)

Median Lethal Dose

Oral: LD₅₀ believed to be >2.00 – 5.00 g/kg (rat) slightly toxic

Inhalation: Not determined

Dermal: LD 50 believed to be > 2.00 g/kg (rabbit) practically non – toxic

Irritation index, Estimation of irritation (Species)

Skin: (Draize) believed to be >3.00 – 5.00/8.0 (rabbit) moderately irritating

Eyes: (Draize) believed to be >25.00 – 50.00/110 (rabbit) moderately irritating

Sensitization: Not determined

Othe: Chronic ingestion of ethanol, a component of this product has caused birth defects as well as developmental effects in laboratory animals

10. Disposal considerations

Waste disposal methods

This product (as presently constituted) has the RCRA characteristics of ignitability and if discarded in its present form would have hazardous waste number of D001. under RCRA it is responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc may change the classification to non – hazardous or hazardous for reasons other than or in addition to ignitability.

Remarks

Do not allow to enter drains or sewers. Can cause explosion.

11. Transport information

DOT:

Proper shipping name: Organic Alcohol 96%
Hazard Class: 3
Identification number: UN 1170
Packing group: II
Label required: Flammable liquid

IMDG:

Proper shipping name: Not determined

ICAO:

Proper shipping name: Not determined

TDG:

Proper shipping name: Not determined

12. Regulatory information

CERCLA/DOT Hazardous Substances (Sequence Numbers and RQ's):

TSCA Inventory Status:

This product or its components are listed on or are exempt from the Toxic Substance Control Act (TSCA) Chemical substance inventory

Other: None

U.S.A. State Regulations

California Proposition 65:

The following detectable components of this product are substances or belong to classes of substances known to the state of California to cause cancer and/or reproductive toxicity.

Chemical name	CAS number
None	

States Right – to – know Regulations

Chemical Name	State Right – to know
Ethyl alcohol	CT, FL,IL,MA,NJ,PA,RI

State list: CT (Connecticut), FL (Florida), IL (Illinois), MI(Michigan), LA (Louisiana), MA (Massachusetts), NJ (New Jersey), PA (Pennsylvania), RI (Rhode Island)

WHMIS Classification: Not determined

Canada Inventory Status:

This product or its components, are listed on or are exempt from the Canadian Domestic Substance List (DSL)

EINECS Inventory Status

This product or its components, are listed on or are exempt from the European Inventory of Existing Chemical Substances (EINECS) or the European List of notified Chemical Substances (ELINCS)

Australia Inventory Status:

This product or its components, are listed on or are exempt from the Australian Inventory of Chemical Substances (AICS)

Japan Inventory Status:

This product or its components, are listed on or are exempt from the Japanese Ministry of International Trade and industry (MITI) Inventory

13. Environmental Information

Aquatic Toxicity: Not determined

Mobility: Not determined

Persistence and Biodegradability: Not determined

Potential to Bioaccumulation: Not determined

Remarks: None

14. Other Information

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication as part of Ethimex Ltd product safety programme. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein. Data sheets are available for all Ethimex Ltd products. You are urged to obtain data sheets for all Ethimex Ltd products you buy, process and use or distribute and you are encouraged and requested to advise those who may come in contact with such products of the information contained herein.

To determine applicability or effect of any law or regulation with respect to the product, user should consult legal advisor or the appropriate administration. Ethimex Ltd does not undertake to furnish advice on such matters.

15. Product label

Read and understand material safety data sheet before handling or disposing of products. This label complies with the requirements of the OSHA Hazard Communication Standard (29 CFR 1919.1200) for use in the workplace. This label is not intended to be used with packaging intended for sale to consumers and may not conform to the requirements of the consumer product safety act or other related regulatory requirements.

94010 190 Proof Organic Alcohol min 96%

Warning Statement

Flammable liquid and vapour
May cause dizziness and drowsiness
May cause eye and skin irritation
Aspiration hazard if swallowed
Can enter lungs and cause damage
For industrial use only
Can cause liver damage

Precautionary Measures

- Keep away from heat, sparks or flame
- Use only with adequate ventilation
- Avoid breathing vapour, mist or gas
- Avoid contact with eyes, skin and clothing
- Keep container closed
- Wash thoroughly after handling

First Aid

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.

Inhalation

If inhaled, remove to fresh air, if not breathing, clear person's airway and give artificial respiration. If breathing is difficult, qualified medical personnel may administer oxygen. Get medical attention immediately.

Note to Physician

Aspiration of this product during induced emesis may result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a poison centre for additional treatment information.

FIRE

In case of fire, use water spray, dry chemical, alcohol resistant foam or carbon dioxide. Water may be ineffective on flames. Use water spray to keep containers cool and protect personnel attempting to stop the leak.

Chemical Name	CAS Number	Range in %
*Ethyl Alcohol	64-17-5	80.00-94.99
Water	7732-18-5	3.00-9.99

Product is hazardous according to OSHA (1910.1200)

* Component is hazardous according to OSHA

Pennsylvania Special Hazardous Substance(s): None

Skin contact

Wash skin with plenty of soap and water until all traces of material are removed. Remove and clean contaminated clothing and shoes. Get medical attention if skin irritation persists or skin contact has been prolonged.

Ingestion

If person is conscious and can swallow, give two glasses of water (16oz) but do not induce vomiting. If vomiting occurs, give fluids again. Have medical personnel determine if evacuation of stomach or induction of vomiting is necessary. Do not give anything by mouth to an unconscious or convulsing person

HMIS		NFPA	
Health: 2	Reactivity: 0	Health: 1	Reactivity: 0
Flammability: 3	Special: 0	Flammability: 3	Special: 0

Transportation

DOT: Proper Shipping Name: Organic Alcohol min 96%
Hazard Class: 3
Identification number: UN 1170
Packing group: II
Label required: Flammable liquid

CAUTION

Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.

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