



Product of european origin conditioned by CLCM-LABS  
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## SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

Identification of the substance	Ethanol Absolute $\geq 99,8$ % Extra Pure
Alternative Names	Ethylic alcohol, EtOH, Ethylol, Hydroxyethane
Article number	CL4607.1KABS / CL4607.2KABS / CL4607.5KABS
EC number	200-578-6
CAS number	64-17-5
Relevant identified uses	Laboratory chemical Laboratory and analytical use Industrial uses Professional uses
Uses advised against	Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Hazard class	Category	Hazard class and category	Hazard statement
Flammable liquid	2	Flam. Liq. 2	H225
Serious eye damage/eye irritation	2	Eye Irrit. 2	H319

#### Label element

Hazard pictograms	GHS02 GHS07	
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Signal Word	Danger
Hazard statements	Highly flammable liquid and vapour (H225). Causes serious eye irritation (H319).
Precautionary statements - prevention	Keep away from heat, sparks, open flames, hot surfaces. No smoking (P210). Keep container tightly closed (P233).
Precautionary statements - response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
Precautionary statements - storage	Store in a well-ventilated place. Keep container tightly closed (P403+P233). Store in a well-ventilated place. Keep cool (P403+P235).
Precautionary statements - disposal	Dispose of contents/container to industrial combustion plant (P501).
Supplemental hazard information	Repeated exposure may cause skin dryness or cracking.

#### Other hazards

Results of PBT and vPvB assessment	According to the results of its assessment, this substance is not a PBT or a vPvB.
Endocrine disrupting properties	Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$ .

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENT

Name of substance	Ethanol
Molecular formula	C <sub>2</sub> H <sub>6</sub> O
Molar mass	46,07 g/mol
CAS No	64-17-5
EC No	200-578-6

### SECTION 4: FIRST AID MEASURES

In case of eye contact	Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.
In case of skin contact	Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.
If swallowed	Rinse mouth. Call a doctor if you feel unwell.
If inhaled	Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.
Protection of first-aiders	No data available.
Notes to physician	None
Most important symptoms and effects, both acute and delayed	Irritation, Nausea, Vomiting, Abdominal pain, Breathing difficulties, Vertigo, Drowsiness, Narcosis, Loss of righting reflex, and ataxia.

### SECTION 5: FIREFIGHTING MEASURES

Suitable extinguishing media	co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	water jet.
Hazardous combustion products	In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ).
Specific hazards during firefighting	Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapourair mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.
Advice for firefighters	In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move container to a well-ventilated and secure area. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Before entry, especially into confined areas, check atmosphere with an appropriate monitor.
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For non-emergency personnel	Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.
Environmental precautions	Keep away from drains, surface and ground water. Danger of explosion.

### Methods and material for containment and cleaning up

Advice on how to contain a spill	Covering of drains.
Advice on how to clean up a spill	Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Other information relating to spills and releases	Place in appropriate containers for disposal. Ventilate affected area.
Reference to other sections	Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Provision of sufficient ventilation.
Measures to prevent fire as well as aerosol and dust generation	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.
Advice on general occupational hygiene	Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight.
Incompatible substances or mixtures	Observe hints for combined storage.
Ventilation requirements	Use local and general ventilation.
Specific designs for storage rooms or vessels	Recommended storage temperature: 15 – 25 °C
Consideration of other advice	Ground/bond container and receiving equipment.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Country	Name of agent	Identifier	STEL[ppm]	Source
IE	ethanol 64-17-5	OELV	1.000	S.I. No.619 of 2001

### Personal protective equipment

Eye protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards.
Hand protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after
Skin protection	Chemical splash protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White)
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing

Advice on safe handling	and protective equipment to remove contaminants. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not breathe dust minimize dust generation and accumulation. Do not get in eyes, on skin, or on
Conditions for safe storage	Store in a cool, dry, well-ventilated area, out of direct sunlight. Keep quantities stored as small as possible. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized
Environmental exposure controls other protection measures	Keep away from drains, surface and ground water. Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid
Colour	colourless
Odor	like: - alcohol
pH	7 (20 °C)
Melting point/freezing point	-114 °C (ECHA)
Water Solubility	≥1.000 g/l at 20 °C (ECHA)
Vapor Pressure	59 hPa at 20 °C
Lower and upper explosion limit	3,1 vol% (LEL) - 27,7 vol% (UEL)
Decomposition temperature	588°C.
Partition coefficient n-octanol/water (log value)	-0,31 (exp. (TOXNET))
Density	0,81 g/cm <sup>3</sup> at 20 °C
Auto-ignition temperature	455 °C at 1.013 Pa (DIN 51794)
Flash point	12 °C (c.c.)
Boiling point or initial boiling point and boiling range	78 °C at 1.013 hPa
Oxidising properties	none
Flammability	flammable liquid in accordance with GHS criteria
Miscibility	completely miscible with water
Temperature class (EU, acc. to ATEX)	T1 (Maximum permissible surface temperature on the equipment: 450°C).

## SECTION 10: STABILITY AND REACTIVITY

Reactivity	It's a reactive substance. Risk of ignition. Vapours may form explosive mixtures with air.
Chemical stability	The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions	<b>Violent reaction with:</b> strong oxidiser, Alkali metals, Alkaline earth metal, Acetic anhydride, Peroxides, Phosphorus oxides (e.g. P2O5), Nitric acid, Nitrate, Perchlorates, => Explosive properties.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Incompatible materials	There is no additional information.
Hazardous decomposition products	Hazardous combustion products: see section 5.

## SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity				
Exposure route	Endpoint	Value	Species	Source
oral	LD50	10.470 mg/kg	rat	ECHA
inhalation: vapour	LC50	124,7 mg/l/4h	rat	ECHA
Skin corrosion/irritation		Shall not be classified as corrosive/irritant to skin.		
Serious eye damage/eye irritation		Causes serious eye irritation.		
Respiratory or skin sensitisation		Shall not be classified as a respiratory or skin sensitiser.		
Germ cell mutagenicity		Shall not be classified as germ cell mutagenic		
Carcinogenicity		Shall not be classified as carcinogenic		
Reproductive toxicity		Shall not be classified as a reproductive toxicant.		
Specific target organ toxicity - single exposure		Shall not be classified as a specific target organ toxicant (single exposure).		
Specific target organ toxicity - repeated exposure		Shall not be classified as a specific target organ toxicant (repeated exposure).		
Aspiration hazard		Shall not be classified as presenting an aspiration hazard.		
Symptoms related to the physical, chemical and toxicological characteristics		<ul style="list-style-type: none"> <li>• If swallowed : vomiting, abdominal pain, nausea, Causes damage to liver through prolonged or repeated exposure if swallowed, loss of righting reflex, and ataxia.</li> <li>• If in eyes : Causes serious eye irritation.</li> <li>• If inhaled : drowsiness, narcosis, vertigo, breathing difficulties, Inebriationdrowsiness, narcosis, vertigo, breathing difficulties, Inebriation</li> <li>• If on skin : Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).</li> </ul>		
Endocrine disrupting properties		Not listed.		

## SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Shall not be classified as hazardous to the aquatic			
Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	15.400 mg/l	fish	ECHA	96 h
EC50	>10.000 mg/l	aquatic invertebrates	ECHA	48 h
ErC50	22.000 mg/l	algae	ECHA	96 h
Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposure time
LC50	1.806 mg/l	aquatic invertebrates	ECHA	10 d
ErC50	675 mg/l	algae	ECHA	4 d
Process of degradability				
Process	Degradation rate		Time	
biotic/abiotic	94%		d	
oxygen depletion	69%		5 d	
oxygen depletion	84%		10 d	
oxygen depletion	97%		20 d	
Bioaccumulative potential		Does not significantly accumulate in organisms.		
n-octanol/water (log KOW)		-0,31 (Exp. (TOXNET))		
BOD5/COD		0,62110553		
Mobility in soil		Data are not available.		

Results of PBT and vPvB assessment	Data are not available.
Endocrine disrupting properties	Not listed.
Other adverse effects	Data are not available.


### SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
Sewage disposal-relevant information	Do not empty into drains.
Waste treatment of containers/packageings	It is a dangerous waste; only packageings which are approved (e.g. acc. to ADR) may be used.
Relevant provisions relating to waste	The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Remarks	Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

### SECTION 14: TRANSPORT INFORMATION

UN number	ADRRID	UN 1170
	IMDG-Code	UN 1170
	ICAO-TI	UN 1170
UN proper shipping name	ADRRID	ETHANOL
	IMDG-Code	ETHANOL
	ICAO-TI	Ethanol
Transport hazard class(es)	ADRRID	3
	IMDG-Code	3
	ICAO-TI	3
Packing group	ADRRID	II
	IMDG-Code	II
	ICAO-TI	II
Maritime transport in bulk according to IMO instruments	The cargo is not intended to be carried in bulk.	
Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations.	
Special precautions for user	Provisions for dangerous goods (ADR) should be complied within the premises.	

#### Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information.	Proper shipping name :	ETHANOL
	Particulars in the transport document :	UN1170, ETHANOL, 3, II, (D/E).
	Classification code	F1
	Danger label(s)	3 
	Special provisions (SP)	144, 601
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 L
	Transport category (TC)	2
	Tunnel restriction code (TRC)	D/E
	Hazard identification No	33

The information contained in this safety data sheet has been established on the basis of our knowledge at the date of publication of this document. This information is given only as indicative in order to allow handling, manufacturing, storage, transport, distribution, provision, use and disposal under satisfactory conditions of security, and cannot therefore be interpreted as a guarantee or considered as quality specifications. This information also concerns only the product, namely designated and, unless specifically stated otherwise, may not be applicable when mixed said product with other substances or usable for any manufacturing process. He returns solely for the user to determine the appropriation of materials. The information provided is not intended as a guarantee of the characteristics

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