

# ETHANOL

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product name:	Ethanol
Trade name:	Ethanol, Ethyl Alcohol
Synonyms:	Ethyl Alcohol 70 – 100% V/V
Chemical name:	Ethanol
Chemical formula	C <sub>2</sub> H <sub>6</sub> O
CAS Number:	64-17-5
EC Number:	200-578-6

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s): Solvent. Aerosol propellant, PC4 Anti-Freeze and de-icing products PC18 Ink and toners, PC12 Fertilizers, PC13 Fuels, PC3 Air care products PC8 Biocidal products (e.g. Disinfectants, pest control) PC23 Leather tanning, dye, finishing, impregnation and care products, PC31 Polishes and wax blends, PC34 Textile dyes, finishing and impregnating products; including bleaches and other processing aids, PC28 Perfumes, fragrances, PC39 Cosmetics, personal care products PC27 Plant protection products, PC21 Laboratory Chemicals, PC29 Pharmaceuticals.

Uses Advised against: Not known.

### 1.3 Details of the supplier of the safety data sheet

Company name:	East Harbour Group Ltd 20 Clough Road, Severalls Industrial Park Colchester, Essex, CO4 9QS United Kingdom
Telephone:	+44 (0) 333 242 0100
Email:	<a href="mailto:info@eastharbourgroup.com">info@eastharbourgroup.com</a>

### 1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

## Section 2: Hazardous identification

### 2.1 Classification of the substance or mixture Regulation (EC) No. 1272/2008 (CLP)

Flam. Liq. 2 :Highly flammable liquid and vapour.

Eye Irrit. 2 :Causes serious eye irritation.

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## 2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name Ethanol

Hazard Pictogram(s)



Signal Word(s) Danger

Hazard Statement(s) H225: Highly flammable liquid and vapour.  
H319: Causes serious eye irritation.

## Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233: Keep container tightly closed.  
P240: Ground and bond container and receiving equipment.  
P241: Use explosion-proof electrical/ventilating/lighting/equipment.  
P242: Use non-sparking tools.  
P243: Take action to prevent static discharges.  
P264: Wash hands and exposed skin thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice/attention.  
P370+P378: In case of fire: Use water spray, dry powder or carbon dioxide to extinguish.  
P403+P235: Store in a well-ventilated place. Keep cool.  
P501: Dispose of contents in accordance with local, state or national legislation.

## 2.3 Other hazards

None known.

## 2.4 Additional Information

For full text of H/P Statements see section 16.

## Section 3: Composition/information on ingredients

### 3.1 Substances

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / Registration number(s)	%V/V	Hazard Statement(s)	Hazard Pictogram(s)
ethanol ethyl alcohol	64-17-5	200-578-6	70- 100	Flam. Liq. 2 H225 Eye Irrit. 2 H319	GHS02 GHS07

Contains no non-classified vPvB substances or substances with a Union workplace exposure limit.

For full text of H/P Statements see section 16.

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## 3.2 Mixtures

Not applicable.

## Section 4: First aid measures

### 4.1 Description of first aid measures

**Inhalation** Treat symptomatically. Skin Contact Take off immediately all contaminated clothing. Rinse skin with water.

**Eye Contact** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion** Treat symptomatically.

### 4.2 Most important symptoms and effects, both acute and delayed.

May cause irritation.

### 4.3 Indication of any immediate medical attention and special treatment needed.

Treat symptomatically.

## Section 5: Fire-fighting measures

### 5.1 Fire Fighting Media and Instructions:

Suitable Extinguishing media

Use water spray, dry powder or carbon dioxide to extinguish.

Unsuitable extinguishing media

Water jet spray

### 5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. May decompose in a fire, giving off toxic and irritant vapours.

### 5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

## Section 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Wear suitable protective clothing, gloves and eye/face protection.

### 6.2 Environmental precautions

This material and its container must be disposed of in a safe way.

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### 6.3. Methods and material for containment and cleaning up

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Containers must not be punctured or destroyed by burning, even when empty.

### 6.4 Reference to other sections

See Also Section 8, 13.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Use non-sparking tools. Take action to prevent static discharges. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Temperature Class: T2

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep cool.

Storage temperature

Ambient.

Storage life

Stable under normal conditions.

Incompatible materials

None known.

### 7.3 Specific end use(s)

Solvent. Aerosol propellant, PC4 Anti-Freeze and de-icing products PC18 Ink and toners, PC12 Fertilizers, PC13 Fuels, PC3 Air care products PC8 Biocidal products (e.g. Disinfectants, pest control) PC23 Leather tanning, dye, finishing, impregnation and care products, PC31 Polishes and wax blends, PC34 Textile dyes, finishing and impregnating products; including bleaches and other processing aids, PC28 Perfumes, fragrances, PC39 Cosmetics, personal care products PC27 Plant protection products.

## Section 8: Exposure controls/personal protection

### 8.1 Control parameters

#### 8.1.1 Occupational Exposure Limits

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Ethanol	64-17-5	1000	1920			

Region Source United Kingdom UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

Remark Notes

ethanol ethyl alcohol			
DNEL / DMEL	Oral	Inhalation	Dermal
Industry - Long Term - Local effects		1900 mg/m <sup>3</sup>	

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Industry - Long Term - Systemic effects		950 mg/m <sup>3</sup>	
Industry - Short term - Local effects			
Industry - Short term - Systemic effects			343 mg/kg bw/day
Consumer - Long Term - Local effects			
Consumer - Long Term - Systemic effects	87 mg/kg bw/day	114 mg/m <sup>3</sup>	206 mg/kg bw/day
Consumer - Short term - Local effects		950 mg/m <sup>3</sup>	
Consumer - Short term - Systemic effects			

ethanol ethyl alcohol	
Environment	PNEC
Aquatic Compartment (including sediment)	Fresh Water:0.96 mg/l, Marine Water:0.79 mg/l, Fresh Water Sediment:3.6 mg/kg, Wastewater Treatment:580 mg/l
Terrestrial Compartment	
Atmospheric Compartment	Soil 0.63 mg/kg

**8.2 Exposure controls /****Appropriate engineering controls****8.2.1. Appropriate engineering controls**

Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

**8.2.2. Personal protection equipment**

Eye Protection           Wear eye protection with side protection (EN166).  
Skin protection           Wear protective clothing and gloves: Impervious gloves (EN 374).  
Respiratory protection   Normally no personal respiratory protection is necessary.  
Thermal hazards           None known.

**8.2.3. Environmental Exposure Controls**

Avoid release to the environment.

## Section 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

Appearance	Liquid.
	Colour : Colourless
Odour	Alcohol odour.
Odour threshold	No information available
pH 7, Content:	10.00 g/l, 20° C
Melting point/freezing point	-114°C

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Initial boiling point and boiling range	78.2°C @ 760mm Hg : Ethanol 100
Flash Point	12 °C 12°C [Closed cup] The following information refers to pure: Ethanol 27°C [Closed cup] : Ethanol 70%
Evaporation rate	No information available
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Lower and upper explosion limit : 3.5% (V) / 15% (V)
Vapour pressure	5.85 hPa @ 20°C
Vapour density	2.6
Density (g/ml)	@ 20C: 789.33, 790 kg/m <sup>3</sup>
Relative density	0.78816 - 0.8845@ 20°C (70 - 100)
Solubility(ies)	Solubility (Water) : Soluble in water. Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Log Pow : <=4
Auto-ignition temperature	363°C
Decomposition Temperature (°C)	Not known.
Viscosity	1.2mPa•s @ 20°C
Explosive properties	Not explosive. Vapour may create explosive atmosphere.
Oxidising properties	Not oxidising
<b>9.2 Other information</b>	
Refractive Index	1.361@ 20°C ISO 5661
Molecular weight	46.07g/mol
volatility	volatile
Critical Temperature	Not applicable
Explosive under the influence of a flame	No

## Section 10: Stability and Reactivity

10.1 Reactivity	Vapours may form explosive mixture with air
10.2 Chemical Stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions known if used for its intended purpose.
10.4 Conditions to avoid	Avoid friction, sparks, or other means of ignition.
10.5 Incompatible materials	Alkali metals, acid anhydrides
10.6 Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

## Section 11: Toxicological Information

### 11.1 Toxicological effects:

Acute toxicity - Ingestion	Not classified.
Acute toxicity - Skin Contact	Not classified.

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Acute toxicity - Inhalation	Not classified.
Skin corrosion/irritation	Not classified. Repeated exposure may cause skin dryness or cracking. (rabbit) : Non-irritant, OECD test guideline 401 (Key literature references and sources for data used to compile the SDS )
Serious eye damage/irritation	Causes serious eye irritation. Severe irritant to rabbit eyes. OECD test guideline 404, (Key literature references and sources for data used to compile the SDS )
Skin sensitization data	Not classified. Based on available data, the classification criteria are not met.
Respiratory sensitization data	Maximisation test (GPMT) OECD test guidelines 406. Sensitisation (guinea pig) - None (Key literature references and sources for data used to compile the SDS )
Germ cell mutagenicity	Not classified. No evidence of mutagenic effects. OECD test guideline 471 (Key literature references and sources for data used to compile the SDS )
Carcinogenicity	Not classified. Based on available data, the classification criteria are not met.
Reproductive toxicity	Not classified. Based on available data, the classification criteria are not met.
Lactation	Not classified.
STOT - single exposure	Not classified. Based on available data, the classification criteria are not met.
STOT - repeated exposure	No observed adverse effect level 1730mg/kg , oral intake (rat) no observed adverse effect level 3160mg/kg oral intake (rat) 90days .
Aspiration hazard	Not classified. Based on available data, the classification criteria are not met.

## 11.2 Other information

Not known.

## Section 12: Ecological Information

### 12.1 Toxicity

#### Ecotoxicity effects

Toxicity - Aquatic invertebrates	LC50 24hour(s) : >100mg/l , (Daphnia magna) , (Static) OECD test guidelines 202 (Key literature references and sources for data used to compile the SDS )
Toxicity - Fish	LC50 (golden orfe (Leuciscus idus)) mg/l 100 (48 hour) , (Static) 203 (Key literature references and sources for data used to compile the SDS )
Toxicity - Algae	EC50 : > 100mg/l , Algae, Chlorella pyrenoidosa, (Static) 201(Key literature references and sources for data used to compile the SDS )
Toxicity - Sediment	Compartment Not classified.
Toxicity - Terrestrial Compartment	Not classified.

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### 12.2 Persistence and degradability

Biodegradation

Chemical oxygen demand

Readily biodegradable (according to OECD criteria). Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Aerobic, >70%, Result: Readily biodegradable. Exposure time: 5d, OECD Test guidelines 301 D, GLP: no, (literature data) Ca. 1,700 mg/g, Directive 84/449/EEC. C.9, GLP: no data

### 12.3 Bioaccumulative potential

Low bioaccumulation potential. (Log Pow  $\leq$ 4)

### 12.4 Mobility in soil

The product is soluble in water.

### 12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

### 12.6 Endocrine disrupting properties

None known.

### 12.7 Other adverse effects

Not known.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Do not allow to enter drains, sewers or watercourses. Do NOT landfill. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator. Dispose at suitable refuse site.

### 13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

## Section 14: Transport Information

### 14.1 UN number

UN No. 1170

### 14.2 UN proper shipping name

UN proper shipping name ETHANOL (ETHYL ALCOHOL)

### 14.3 Transport hazard class(es)

ADR/RID

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ADR/RID Class	3
ADR Classification Code	F1
Special Provisions	144, 601
Limited Quantities	1 L
Excepted Quantities	E2
Emergency Action Code	•2YE
Mixed Packing Instructions for Packages	P001 IBC02 R001
Special Packing Provisions for Packages	
Mixed Packing Instructions for Packages	MP19
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1
Tank Code for Tanks	LGBF
Special Provisions for Tanks	
Vehicle for Tank Carriage	FL
ADR Transport Category	2
Tunnel Restriction Code	D/E
Special Provisions for Carriage - Packages	
Special Provisions for Carriage - Bulk	
Special Provisions for Carriage - Loading, Unloading and Handling	
Special Provisions for Carriage - Operation	S2 S20
ADR HIN	33
IMDG	
IMDG Class	3
Special Provisions	144, 601
Limited Quantities	1 L
Excepted Quantities	E2
Mixed Packing Instructions for Packages	P001 IBC02 R001
Special Packing Provisions for Packages	
Packing Instructions for Portable Tanks	T4
Special Provisions for Portable Tanks	TP1 IMDG EMS F-E, S-D
Stowage and Handling	Category A
Segregation	
Marine Pollutant	
ICAO/IATA	
IATA Proper Shipping Name	ETHANOL
Excepted Quantities	E2
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y341
Passenger and Cargo Aircraft Limited Quantities Max net Qty	1L
Passenger and Cargo Aircraft Packing Instructions	353
Passenger and Cargo Aircraft Max net Qty	5L
Cargo Aircraft Packing Instructions	364
Cargo Aircraft Max net Qty	60L

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Special Provisions	A3, A58, A180
Emergency Response Guidebook (ERG) Code	3L
Labels	
Labels	3



## 14.4 Packing group

Packing group II

## 14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

## 14.6 Special precautions for user

Special precautions for user Not known.

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## Section 15: Regulatory Information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

European Regulations - Authorisations and/or Restrictions On Use

REACH Candidate List of Substances of Very High Concern for Authorisation - Not listed

REACH Authorisation List (Annex XIV) list of substances subject to authorisation - Not listed

REACH Restrictions List (Annex XVII) Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles - ethanol ethyl alcohol (64-17-5)

Regulation (EU) N° 2019/1021 of the European Parliament and of the Council on persistent organic pollutants

Not listed Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer - Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals - Not listed

Community Rolling Action Plan (CoRAP) - Not listed

### 15.2 Chemical Safety Assessment

A REACH chemical safety assessment has not been carried out.

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## Section 16: Other Information

The following sections contain revisions or new statements:

### LEGEND

Hazard Pictogram(s)



GHS02

GHS07

### Hazard classification

Flam. Liq. 2 : Flammable liquid, Category 2

Eye Irrit. 2 : Serious eye damage/irritation, Category 2

### Hazard Statement(s)

H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

### Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use non-sparking tools.

P243: Take action to prevent static discharges.

P264: Wash hands and exposed skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use water spray, dry powder or carbon dioxide to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P501: Dispose of contents in accordance with local, state or national legislation.

### Acronyms

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE : Acute Toxicity Estimate

CAS : Chemical Abstracts Service

DNEL : Derived No Effect Level EC : European Community

EINECS : European Inventory of Existing Commercial Chemical Substances

IATA : International Air Transport Association

IBC : Intermediate Bulk Container

ICAO : International Civil Aviation Organization

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IMDG : International Maritime Dangerous Goods

LTEL : Long term exposure limit

PBT : Persistent, Bioaccumulative and Toxic

PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity

UN : United Nations

vPvB : very Persistent and very Bioaccumulative

Key literature references and sources for data used to compile the SDS:

Regulation (EC) No. 1272/2008 (CLP)

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