

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Ethanol HPLC &gt; 99.9 % gradient grade

Revision date: 01.05.2023

Product code: 20222

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Ethanol HPLC &gt; 99.9 % gradient grade

REACH Registration Number: 01-2119457610-43-XXXX  
CAS No: 64-17-5  
Index No: 603-002-00-5  
EC No: 200-578-6

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemical

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

**Uses advised against**

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet**

Company name: AnalytiChem GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
Telefax: 0203/5194-290  
e-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
Telephone: 0203/5194-107/117  
e-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit

**1.4. Emergency telephone number:**

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

**Further Information**

No data available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Flam. Liq. 2; H225

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

H225

Highly flammable liquid and vapour.

H319

Causes serious eye irritation.

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**Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 Ground and bond container and receiving equipment.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.1. Substances****Chemical characterization**

ALCOHOL

Sum formula: C<sub>2</sub>H<sub>5</sub>OH  
Molecular weight: 46,07 g/mol

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
64-17-5	ethanol			100 %
	200-578-6	603-002-00-5	01-2119457610-43-XXXX	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-17-5	200-578-6	ethanol	100 %
	inhalation: LC50 = 124,7 mg/l (vapours); oral: LD50 = 10470 mg/kg Eye Irrit. 2; H319: >= 50 - 100		

**Further Information**

No data available

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

No data available

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash immediately with: Water  
Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**After ingestion**

Never give anything by mouth to an unconscious person or a person with cramps.

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Rinse mouth immediately and drink plenty of water.

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

Irritant

Dizziness

The product causes narcotic-like effects.

Inebriation

Vomiting

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

No data available

### SECTION 5: Firefighting measures

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Water spray jet, Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

##### **Unsuitable extinguishing media**

no restriction

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

Combustible liquid.

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>) Carbon monoxide

Beware of reignition.

#### **5.3. Advice for firefighters**

Remove persons to safety. Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

In case of fire: Wear self-contained breathing apparatus.

Use water spray jet to protect personnel and to cool endangered containers.

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Suppress gases/vapours/mists with water spray jet.

Move undamaged containers from immediate hazard area if it can be done safely.

### SECTION 6: Accidental release measures

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

##### **General advice**

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Take action to prevent static discharges.

##### **For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

##### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

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#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

Danger of explosion

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

##### **For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

##### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

##### **Other information**

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation.

#### **Advice on protection against fire and explosion**

Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### **Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

#### **Further information on handling**

Take off immediately all contaminated clothing and wash it before reuse.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

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

#### **Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### **Hints on joint storage**

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

#### **Further information on storage conditions**

Vapours may form explosive mixtures with air.

### **7.3. Specific end use(s)**

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Laboratory use Laboratory chemical

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
64-17-5	ethanol			
Worker DNEL, long-term		inhalation	systemic	950 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	343 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	114 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	87 mg/kg bw/day

**PNEC values**

CAS No	Substance	Value
64-17-5	ethanol	
Freshwater		0,96 mg/l
Freshwater (intermittent releases)		2,75 mg/l
Marine water		0,79 mg/l
Freshwater sediment		3,6 mg/kg
Marine sediment		2,9 mg/kg
Secondary poisoning		380 mg/kg
Micro-organisms in sewage treatment plants (STP)		580 mg/l
Soil		0,63 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 897 Butoject®

Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm

Wearing time with permanent contact: > 480 min

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By short-term hand contact  
Trade name/designation KCL 720 Camapren®  
Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm  
Wearing time with occasional contact (splashes): > 60 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

**Skin protection**

Flame-retardant protective clothing. Wear anti-static footwear and clothing

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**Environmental exposure controls**

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.  
Danger of explosion

**SECTION 9: Physical and chemical properties**

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

Physical state:	Liquid
Colour:	colourless
Odour:	like: Ethanol
Odour threshold:	No data available
Melting point/freezing point:	-114,5 °C
Boiling point or initial boiling point and boiling range:	78 °C
Flammability:	not applicable not applicable
Lower explosion limits:	3,1 vol. %
Upper explosion limits:	27,7 vol. %
Flash point:	12 °C
Auto-ignition temperature:	425 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	7 (10g/l)
Viscosity / kinematic:	No data available
Solubility in other solvents	not determined
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	-0,31
Dispersion stability:	No data available
Vapour pressure:	59 hPa
(at 50 °C)	
Vapour pressure:	No data available
Density:	0,79000 g/cm³
Relative density:	No data available
Bulk density:	No data available
Relative vapour density:	not determined
Particle characteristics:	No data available

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#### 9.2. Other information

##### Information with regard to physical hazard classes

Explosive properties

Vapours can form explosive mixtures with air.

Sustaining combustion:

Sustaining combustion

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

##### Other safety characteristics

Evaporation rate:

not determined

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

not determined

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:  
(at 20 °C)

1,2 mPa·s

Flow time:

No data available

##### Further Information

No data available

## SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Highly flammable.

Vapours can form explosive mixtures with air.

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

Oxidising agent

#### 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

#### 10.6. Hazardous decomposition products

Hazardous combustion products

In case of fire may be liberated: Carbon dioxide (CO<sub>2</sub>) Carbon monoxide

##### Further information

No data available

## SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

##### Acute toxicity

Based on available data, the classification criteria are not met.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol				
	oral	LD50 mg/kg	10470	Rat	Study report (1976) OECD Guideline 401
	inhalation (4 h) vapour	LC50 mg/l	124,7	Rat	Study report (1980) OECD Guideline 403

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

There are no data available on the preparation/mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the preparation/mixture itself.

**Additional information on tests**

There are no data available on the preparation/mixture itself.

**Practical experience**

There are no data available on the preparation/mixture itself.

**11.2. Information on other hazards**

**Endocrine disrupting properties**

There are no data available on the preparation/mixture itself.

**Other information**

Irritant

Dizziness

The product causes narcotic-like effects.

Inebriation

Vomiting

**Further information**

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

**SECTION 12: Ecological information**

**12.1. Toxicity**

The product is not: Ecotoxic.



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
64-17-5	ethanol					
	Acute fish toxicity	LC50 15400 mg/l	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 ca. 22000 mg/l	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 10000 mg/l	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	Algae toxicity	NOEC 5400 mg/l	5 d	Skeletonema costatum	Environ Toxicol Chem 8(5):451-455. (1989)	Study to determine the sensitivity of a
	Crustacea toxicity	NOEC 2 mg/l	10 d	Ceriodaphnia dubia	Arch Environ Contam Toxicol 20(2):211-21	Follows the basic methodology for the th

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
64-17-5	ethanol	-0,77

**BCF**

CAS No	Chemical name	BCF	Species	Source
64-17-5	ethanol	1	Cyprinus carpio	Comparative Biochemi

**12.4. Mobility in soil**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

There are no data available on the mixture itself.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

There are no data available on the mixture itself.

**12.7. Other adverse effects**

Do not empty into drains.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Do not allow to enter into surface water or drains.

Send to a physico-chemical treatment facility under observation of official regulations.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

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**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1170
<b>14.2. UN proper shipping name:</b>	ETHANOL (ETHYL ALCOHOL)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Classification code:	F1
Special Provisions:	144 601
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1170
<b>14.2. UN proper shipping name:</b>	ETHANOL (ETHYL ALCOHOL)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Classification code:	F1
Special Provisions:	144 601
Limited quantity:	1 L
Excepted quantity:	E2

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1170
<b>14.2. UN proper shipping name:</b>	ETHANOL (ETHYL ALCOHOL)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Special Provisions:	144
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 1170
<b>14.2. UN proper shipping name:</b>	ETHANOL (ETHYL ALCOHOL)
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3
Special Provisions:	A3 A58 A180
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

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**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Combustible liquid.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40

Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 3,9.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.