

according to Regulation (EC) No 1907/2006

# Ethanol > 99.8Vol.-% pure

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

#### 1.1. Product identifier

Ethanol > 99.8Vol.-% pure

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

ACD

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 For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,

number: 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:







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**Hazard statements** 

H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.

**Precautionary statements** 

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

smoking.

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

P280

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

water or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

#### 2.3. Other hazards

No information available.

# **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

# **Chemical characterization**

**ALCOHOL** 

Sum formula: C2H5OH

Molecular weight: 46,07 g/mol

# Relevant ingredients

CAS No	Chemical name				
	EC No	Index No	REACH No		
	Classification (Regulation (EC) No 1272/2008)				
64-17-5	ethanol				
	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. I	c. 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				

# **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



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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 indestion

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

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 (CO2), 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 (CO2) 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.



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Remove persons to safety.

**Emergency procedures** 

Consult an expert

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

# For emergency responders

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

#### 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. The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

# 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,



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open flames and other ignition sources. No smoking.

# Hints on joint storage

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

# Further information on storage conditions

Vapours may form explosive mixtures with air.

# 7.3. Specific end use(s)

Laboratory use Laboratory chemical

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

# 8.1. Control parameters

# Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	

#### **DNEL/DMEL values**

CAS No	Substance						
DNEL type		Exposure route	Effect	Value			
64-17-5	ethanol						
Worker DNEL,	long-term	inhalation	systemic	950 mg/m³			
Worker DNEL,	long-term	dermal	systemic	343 mg/kg bw/day			
Consumer DNE	EL, long-term	inhalation	systemic	114 mg/m³			
Consumer DNEL, long-term		dermal	systemic	206 mg/kg bw/day			
Consumer DNE	EL, long-term	oral	systemic	87 mg/kg bw/day			

### **PNEC values**

CAS No	Substance					
Environmenta	Environmental compartment					
64-17-5	ethanol					
Freshwater		0,96 mg/l				
Freshwater (in	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-organis	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.



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### Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: 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

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.

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **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

78 °C

boiling range:

Flammability: not applicable Lower explosion limits: 3,1 vol. % Upper explosion limits: 27,7 vol. % 12 °C Flash point: 425 °C Auto-ignition temperature: Decomposition temperature: not determined pH-Value (at 20 °C): 7 (10g/l) No data available Viscosity / kinematic:

Solubility in other solvents

not determined

Dissolution rate:

No data available
Partition coefficient n-octanol/water:

-0,31



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Dispersion stability:

Vapour pressure:

No data available
59 hPa

(at 50 °C)

Vapour pressure:No data availableDensity:0,79000 g/cm³Relative density:No data availableBulk density:No data availableRelative vapour density:not determinedParticle characteristics:No data available

### 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:

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: 1,2 mPa⋅s

(at 20 °C)

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.

### 10.5. Incompatible materials

various plastics

### 10.6. Hazardous decomposition products

Hazardous combustion products

In case of fire may be liberated: Carbon dioxide (CO2) Carbon monoxide



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#### **Further information**

No data available

# **SECTION 11: Toxicological information**

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

#### Toxicocinetics, 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.

CAS No	Chemical name								
	Exposure route	Dose		Species	Source	Method			
64-17-5	ethanol	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

Serious eye damage/eye irritation: 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

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

Reproductive toxicity: 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.

### 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



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inflammation).

# **SECTION 12: Ecological information**

### 12.1. Toxicity

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

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method
64-17-5	ethanol						
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus	Bulletin of Environmental Contamination	other: EPA-660/3-75-00 9, 1975
	Acute algae toxicity	ErC50 22000 mg/l	ca.	96 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety 7	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna	Water Research 23(4): 495-499 (1989)	other: DIN 38412 Teil 11
	Algae toxicity	NOEC mg/l	5400	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.

### 12.6. Endocrine disrupting properties

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

# 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



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### **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.

#### 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)

14.1. UN number or ID number: UN 1170

14.2. UN proper shipping name: ETHANOL (ETHYL ALCOHOL)

14.3. Transport hazard class(es): П 14.4. Packing group: 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/F

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1170

**14.2. UN proper shipping name:** ETHANOL (ETHYL ALCOHOL)

14.3. Transport hazard class(es):

14.4. Packing group:

Hazard label:

Classification code:

Special Provisions:

Limited quantity:

Excepted quantity:

14. 3

14. 601

14. 601

14. Excepted quantity:

E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 1170

14.2. UN proper shipping name: ETHANOL (ETHYL ALCOHOL)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3Special Provisions:144Limited quantity:1 LExcepted quantity:E2EmS:F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number or ID number:** UN 1170

14.2. UN proper shipping name: ETHANOL (ETHYL ALCOHOL)

14.3. Transport hazard class(es):314.4. Packing group:IIHazard label:3

Special Provisions: A3 A58 A180

Limited quantity Passenger: 1 L
Passenger LQ: Y341



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Excepted quantity: E2

IATA-packing instructions - Passenger:353IATA-max. quantity - Passenger:5 LIATA-packing instructions - Cargo:364IATA-max. quantity - Cargo:60 L

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 Directive

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): 3,9,12,15.

#### Abbreviations and acronyms

Flam. Liq: Flammable liquid

Eye Irrit: Eye irritation

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**

Provide appropriate information, instructions and training to users

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



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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.