

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 02.12.2011

Version number 1

Revision: 01.12.2011

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

### 1.1. Product identifier

· Trade name: Ethanol undenatured absolute

· Article number: 39556

· CAS Number:

64-17-5

· EC number:

200-578-6

· Index number:

603-002-00-5

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

· Application of the substance / the preparation Laboratory chemicals

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

· Manufacturer/Supplier:

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

· Information department: Product Safety department Tel.: +49 6221 13840-35

· 1.4. Emergency telephone number: +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 2 Hazards identification

· 2.1. Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



F; Highly flammable

R11: Highly flammable.

· Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· 2.2. Label elements

· Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms GHS02

· Signal word Danger

· Hazard statements

H225 Highly flammable liquid and vapour.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P243 Take precautionary measures against static discharge.

P233 Keep container tightly closed.

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

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

(Contd. on page 2)

GB

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**Trade name: Ethanol undenatured absolute**

(Contd. of page 1)

- **2.3. Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**\* 3 Composition/information on ingredients**

- **3.1. Chemical characterization: Substances**
- **CAS No. Description:**  
64-17-5 ethanol
- **Identification number(s):**
- **EC number:** 200-578-6
- **Index number:** 603-002-00-5
- **Description:**
- **Empirical formula:** C<sub>2</sub>H<sub>6</sub>O
- **MW:** 46,1

**\* 4 First aid measures**

- **4.1. Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.
- **Information for doctor**
- **4.2. Most important symptoms and effects, both acute and delayed** Dizziness
- **4.3. Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**\* 5 Firefighting measures**

- **5.1. Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2. Special hazards arising from the substance or mixture** Can form explosive gas-air mixtures.
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**\* 6 Accidental release measures**

- **6.1. Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Keep away from ignition sources
- **6.2. Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
Do not allow to enter sewers/ surface or ground water.
- **6.3. Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **6.4. Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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(Contd. on page 3)

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Revision: 01.12.2011

Trade name: Ethanol undenatured absolute

(Contd. of page 2)

## 7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2. Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store receptacle in a well ventilated area.
- **7.3. Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

### 8.1. Control parameters

- **Components with limit values that require monitoring at the workplace:**

<b>64-17-5 ethanol (80-100%)</b>
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WEL ()	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
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- **Additional information:** The lists that were valid during the creation were used as basis.

### 8.2. Exposure controls

- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **Breathing equipment:**  
Short term filter device:  
Filter A/P2.
- **Protection of hands:**  
Protective gloves.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Chloroprene rubber, CR
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing.

GB

(Contd. on page 4)

**Safety data sheet**  
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Printing date 02.12.2011

Version number 1

Revision: 01.12.2011

Trade name: Ethanol undenatured absolute

(Contd. of page 3)

### 9 Physical and chemical properties

#### · 9.1. Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic

##### · Change in condition

Melting point/Melting range: -114°C

Boiling point/Boiling range: 78°C

· Flash point: 12°C

· Ignition temperature: 425°C

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

##### · Explosion limits:

Lower: 3.4 Vol %

Upper: 15 Vol %

· Vapour pressure at 20°C: 59 hPa

· Density at 20°C: 0.79 g/cm<sup>3</sup>

##### · Solubility in / Miscibility with

Water at 20°C: 1000 g/l

##### · Viscosity:

dynamic at 20°C: 1.3 mPas

· 9.2. Other information There are no more data available.

### 10 Stability and reactivity

#### · 10.1. Reactivity

#### · 10.2. Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

#### · 10.3. Possibility of hazardous reactions

Reacts with oxidizing agents

Reacts with peroxides

Reacts with acids

Reacts with alkaline metals

· 10.4. Conditions to avoid No further relevant information available.

· 10.5. Incompatible materials: No further relevant information available.

· 10.6. Hazardous decomposition products: No dangerous decomposition products known

### 11 Toxicological information

#### · 11.1. Information on toxicological effects

##### · Acute toxicity:

##### · LD/LC50 values that are relevant for classification:

##### 64-17-5 ethanol

Oral	LD50	6300 mg/kg (rabbit)
		7060 mg/kg (rat)

##### · Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritating effect.

(Contd. on page 5)

**Safety data sheet**  
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Version number 1

Revision: 01.12.2011

Trade name: *Ethanol undenatured absolute*

(Contd. of page 4)

· **Sensitization:** No sensitizing effects known.


## 12 Ecological information

- **12.1. Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
LC50 / 48 h (*Leuciscus idus*): 8140 mg / l  
LC50 / 96 h (*Copepoda*): 6500 mg / l
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5. Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6. Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **13.1. Waste treatment methods**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- **14.1. UN-Number**
- **ADR, IMDG, IATA** 1170
- **14.2. UN proper shipping name**
- **ADR** 1170 ETHANOL (ETHYL ALCOHOL)
- **IMDG** ETHANOL (ETHYL ALCOHOL)
- **IATA** Ethanol
- **14.3. Transport hazard class(es)**
- **ADR**
- 
- **Class** 3 Flammable liquids.

(Contd. on page 6)

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(Contd. of page 5)

· <b>Label</b>	3
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>14.4. Packing group</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>14.5. Environmental hazards:</b>	Not applicable.
· <b>14.6. Special precautions for user</b>	Warning: Flammable liquids.
· <b>Danger code (Kemler):</b>	33
· <b>EMS Number:</b>	F-E,S-D
· <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Tunnel restriction code</b>	D1E
· <b>UN "Model Regulation":</b>	UN1170, ETHANOL (ETHYL ALCOHOL), 3, II

### 15 Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Disturbance regulations:**  
Critical quantity values according to the regulations on accidents should be adhered to.
- **Technical instructions (air):**

Class	Share in %
NK	100.0
- **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
- **15.2. Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**  
 PBT: persistent, bioaccumulative, toxic substance (REACH)  
 vPvB: very persistent, very bioaccumulative substance (REACH)  
 REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
 CLP: Regulation on classification, labelling and packaging of substances and mixtures  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods

(Contd. on page 7)

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(Contd. of page 6)

*IATA: International Air Transport Association**ICAO: International Civil Aviation Organization**GHS: Globally Harmonized System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent***· \* Data compared to the previous version altered.**

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