

Safety Data Sheet

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** ethanol
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2 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
64-17-5 ethanol
- **Identification number(s)**
- **EINECS Number:** 200-578-6
- **Index number:** 603-002-00-5

3 Hazards identification

- **Hazard description:**



F Highly flammable

- **Information concerning particular hazards for human and environment:**
R 11 Highly flammable.

4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

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- **Measures for cleaning/collecting:**
Dilute with plenty of water.
Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special requirement
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

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

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

64-17-5 ethanol

PEL (USA)	1900 mg/m ³ , 1000 ppm
REL (USA)	1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , NIC-1000 ppm Long-term value: 1880 mg/m ³ , 1000 ppm NIC-A3
WEL (Great Britain)	1920 mg/m ³ , 1000 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**
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.

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· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **General Information**

Form: Fluid
Colour: Colourless
Odour: Alcohol-like

· **Change in condition**

Melting point/Melting range: -114,5°C
Boiling point/Boiling range: 78°C

· **Flash point:** 13°C

· **Ignition temperature:** 425°C

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

· **Explosion limits:**

Lower: 3.5 Vol %
Upper: 15 Vol %

· **Vapour pressure at 20°C:** 59 hPa

· **Density at 20°C:** 0.79 g/cm³

· **Solubility in / Miscibility with water at 20°C:**

1 g/l

· **Viscosity:**

Dynamic at 20°C: 1.2 mPas

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

· **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

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

12 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.

13 Disposal considerations

· **Product:**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 3 Flammable liquids.

· **Danger code (Kemler):** 33

· **UN-Number:** 1170

· **Packaging group:** II

· **Hazard label:** 3

· **Description of goods:** 1170 ETHANOL (ETHYL ALCOHOL)

· **Maritime transport IMDG:**



· **IMDG Class:** 3

· **UN Number:** 1170

· **Label:** 3

· **Packaging group:** II

· **EMS Number:** F-E,S-D

· **Marine pollutant:** No

· **Proper shipping name:** ETHANOL (ETHYL ALCOHOL)

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· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1170
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** ETHANOL (ETHYL ALCOHOL)

15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**



F Highly flammable

· **Risk phrases:**

11 Highly flammable.

· **Safety phrases:**

2 Keep out of the reach of children.

7 Keep container tightly closed.

16 Keep away from sources of ignition - No smoking.

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:**

Mr. Menon

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

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent