

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

1 Identification of substance:

- **Product details:**
- **Trade name:** Ethanol min. 95% by volume
- **Article number:** 3405
- **Application of the substance / the preparation**
Chemicals for synthesis
Laboratory chemicals
- **Manufacturer/Supplier:**

Mallinckrodt Baker B.V
P.O.Box 1
7400 AA Deventer
The Netherlands

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E-mail : jtbaker.nl@covidien.com

- **Informing department:**
Quality Systems & Regulatory Affairs
E-mail : sjors.duteweert@covidien.com
- **Emergency information:**

Environment Health & Safety department
during normal opening times (8 am till 5.30 pm) tel: (+31)(0) 570 687500

2 Hazards identification

- **Hazard designation:**



F Highly flammable

- **Information pertaining to particular dangers for man and environment**
R 11 Highly flammable.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Designation:**
64-17-5 Ethanol Absolute
- **Identification number(s):**
- **EINECS Number:** 200-578-6
- **EC Number:** 603-002-00-5

4 First aid measures

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** The product is not skin irritating.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse out mouth

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

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· **Protective equipment:** Wear self-contained breathing apparatus.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Prevent material from reaching sewage system, holes and cellars.
Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

7 Handling and storage

- **Handling**
- **Information for safe handling:** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
+ 15°C - +25°C
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

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

· **Components with critical values that require monitoring at the workplace:**

64-17-5 Ethanol Absolute

WEL () Long-term value: 1920 mg/m³, 1000 ppm

· **Additional information:** The lists that were valid during the compilation were used as basis.

- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands during breaks and at the end of the work.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **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**
Butyl rubber, BR
Neoprene 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 trough 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 safety glasses.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· **General Information**

Colour: Colourless
Smell: Alcohol-like

· **Change in condition**

Melting point/Melting range: -114.5°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/steam mixtures is possible.
- **Critical values for explosion:**
 - Lower:** 3.5 Vol %
 - Upper:** 15 Vol %

- **Steam pressure at 20°C:** 57 hPa
- **Density at 20°C:** 0.79 g/cm³
- **Solubility in / Miscibility with Water at 20°C:** 1.000 g/l

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** Heat,boiling teperatures.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of composition:** No dangerous decomposition products known

11 Toxicological information

· **Acute toxicity:**

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

64-17-5 Ethanol Absolute

Oral	LD50	7060 mg/kg (rat)
	LC50/72h	20000 mg/l (rat)
	LD10	1400 mg/kg (Human)
		2000 mg/kg (Child)

- **Primary irritant effect:**
 - **on the skin:** redness
 - **on the eye:** redness
- **Sensitization:** No sensitizing effect known.

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12 Ecological information:

· **Ecotoxicological effects:**

· **Acquatic toxicity:**

64-17-5 Ethanol Absolute

EC50/48h >10.000 mg/l (daphnia magna)

IC50 / 72h 5000 mg/l (algae)

LC50 >10000 mg/l (Fish)

· **General notes:**

Water hazard class (D) 1 (Assessment by list): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

13 Disposal considerations

· **Product:**

· **Recommendation**

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

· **Uncleaned packagings:**

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

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

14 Transport information

· **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**



· **ADR/RID-GGVS/E Class:** 3 Flammable liquids.

· **Kemler Number:** 33

· **UN-Number:** 1170

· **Packaging group:** II

· **Label:** 3

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

· **Limited quantities (LQ):** LQ4

· **Transport category:** 2

· **Tunnel restriction code:** D1E

· **Maritime transport IMDG/GGVSea:**



· **IMDG/GGVSea Class:** 3

· **UN Number:** 1170

· **Label:** 3

· **Packaging group:** II

· **EMS Number:** F-E,S-D

· **Marine pollutant:** No

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· **Correct technical name:** ETHANOL (ETHYL ALCOHOL)

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



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

15 Regulatory information

- **Designation according to EC guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
- **Code letter and hazard designation of product:**
F Highly flammable
- **Risk phrases:**
11 Highly flammable.
- **Safety phrases:**
*7/9 Keep container tightly closed and in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
60 This material and its container must be disposed of as hazardous waste.*

16 Other information:

- These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*
- **Department issuing data specification sheet:** *Quality Assurance Department*
 - **Contact:** *Sjors duteweert*
 - *** Data compared to the previous version altered.**