



Material Safety Data Sheet

Ethanol 99.9/UN

Version 1.08

Revision Date 28.03.2007

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

Trade name	Ethanol 99.9/UN	
Synonyms	Ethanol 99.9/UN	
Use	For industrial use only., raw material for pharmaceutical products	
Company	Sasol Solvents A division of Sasol Chemical Industries Sturdee Avenue 2 ZA 2196 Rosebank	
Information (Product safety)	Telephone: +27 112800000 Fax: +27 112800198	
Emergency telephone number	Europe, Israel, Africa, Americas	+44 (0)208 762 8322
	Middle East, Arabic African countries	+961 3 487 287
	Asia Pacific	+65 633 44 177
	China	+86 10 5100 3039
	South Africa	+27 (0)17 610 4444

2. Composition/information on ingredients

Preparation on the base:

ethanol; ethyl alcohol

Contents: 99.99 %W/W

CAS-No. 64-17-5
Symbol(s) F

Index-No. 603-002-00-5
R-phrase(s) -R11

EC-No. 200-578-6

For the full text of the R phrases mentioned in this Section, see Section 16.

3. Hazards identification

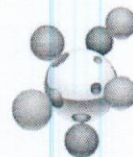
Identification of the risks

R11 Highly flammable.

4. First aid measures

Inhalation

Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.



Material Safety Data Sheet

Ethanol 99.9/UN

Version 1.08

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Skin contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.
Ingestion	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.

5. Fire-fighting measures

Suitable extinguishing media	Water spray, Dry powder, Alcohol-resistant foam
Specific hazards during fire fighting	Flash back possible over considerable distance. Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	Cool containers / tanks with water spray.

6. Accidental release measures

Personal precautions	Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist.
Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste.
Additional advice	Never return spills in original containers for re-use.

7. Handling and storage

Handling

Safe handling advice	Do not breathe vapours or spray mist. Wear personal protective equipment.
Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition. Use explosion-proof equipment.

Storage

Requirements for storage areas and containers	Keep containers tightly closed in a cool, well-ventilated place.
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Material Safety Data Sheet

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8. Exposure controls / personal protection

Components with workplace control parameters

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

Contains no substances with occupational exposure limit values.

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection gloves suitable for permanent contact:
Material: butyl-rubber
Break through time: 4 h
Material thickness: 0.5 mm
unsuitable gloves
Material: Polyvinylchloride, leather, nitrile rubber/nitrile latex,
natural rubber/natural latex

Eye protection Safety glasses with side-shields

Skin and body protection Safety shoes, protective suit

Hygiene measures Wash hands before breaks and immediately after handling the product.

Protective measures Wear suitable protective equipment.

9. Physical and chemical properties

Form	liquid
Colour	colourless
Odour	alcoholic
pH	7
Melting point/range	-114.1 °C
Boiling point/range	78.5 °C
Flash point	16 °C; closed cup
Autoignition temperature	363 °C
Lower explosion limit	3.3 %(V)
Upper explosion limit	19 %(V)



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Density	0.788 g/cm ³ ; 20 °C
Water solubility	completely miscible, completely soluble
Solubility in other solvents	Medium: Diethylether; completely soluble
Viscosity, dynamic	1.4 mPa.s
Relative vapour density	1.59

10. Stability and reactivity

Materials to avoid	Oxidizing agents, Acids and bases
Hazardous decomposition products	Carbon oxides

11. Toxicological information

Acute oral toxicity	Ethanol: LD50 rat: 7,060 mg/kg; literature value
Acute inhalation toxicity	Ethanol: LC50 rat: 66,000 mg/l; literature value; 4 h
Acute dermal toxicity	Ethanol: LDLo rabbit: 20,000 mg/kg; literature value

12. Ecological information

Ecotoxicity effects	
Toxicity to fish	Ethanol: LC50 Pimephales promelas: 15,300 mg/l; 96 h; literature value

13. Disposal considerations

Product	Dispose of in accordance with local regulations.
Contaminated packaging	Store containers and offer for recycling of material when in accordance with the local regulations.

14. Transport information

ADR	UN-No.: 1170; Class: 3; Packaging group: II; F1; Description of the goods: ETHANOL
RID	UN-No.: 1170; Class: 3; Packaging group: II; F1; Description of the goods: ETHANOL
ADNR	UN-No.: 1170; Class: 3; Packaging group: II; F1; Description of the goods: ETHANOL
IMDG	UN-No.: 1170; Class: 3; EmS: F-E, S-D; Packaging group: II; Description of the goods: ETHANOL



Material Safety Data Sheet

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Revision Date 28.03.2007

ICAO/IATA

UN-No. : 1170; Class: 3; Packaging group: II; Description of the goods: Ethanol

15. Regulatory information

Labelling



Regulatory base

67/548/EEC

Symbol(s)

F: Highly flammable

R-phrase(s)

R11: Highly flammable.

S-phrase(s)

S 3/7: Keep container tightly closed in a cool place.
S 9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition - No smoking.
S23: Do not breathe vapour.
S36: Wear suitable protective clothing.
S60: This material and its container must be disposed of as hazardous waste.

Hazardous components which must be listed on the label

ethanol; ethyl alcohol

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R11

Highly flammable.



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All reasonable efforts were exercised to compile this MSDS in accordance with ISO 11014 and ANSI Z400.1, 1993. The MSDS provides information regarding the health, safety and environmental hazards, at the date of issue, to facilitate the safe receipt, use and handling of the product in the workplace. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which the product may be handled, used and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this MSDS in the context within which the product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place as regards health and safety. This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of the product.

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