



Safety Data Sheet

Ethanol 99.9/UN

Version 1.01

Revision Date 23.10.2018

SECTION 1. Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name Ethanol 99.9/UN

Synonyms Ethyl alcohol

Product code 2020

CAS-No. 64-17-5

EINECS-No. 200-578-6

Relevant identified uses of the substance or mixture and uses advised against

Use Solvent. Raw material. Industrial use.

Manufacturer or supplier's details

Company Sasol Chemicals, a division of Sasol South Africa Ltd

Address Sasol Place, 50 Katherine Street
Sandton
2090
South Africa

Telephone +27103445000

E-mail address sasolchem.info.sa@sasol.com

Emergency telephone number +44 (0)1235 239 670 (Europe, Israel, Africa, Americas)

+44(0)1235 239 671 (Middle East, Arabic African countries)

+65 3158 1074 (Asia Pacific)

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+86 10 5100 3039 (China)

+27 (0)17 610 4444 (South Africa)

+61 (2) 8014 4558 (Australia)

SECTION 2. Hazards identification

Classification of the substance or mixture

Japan. NITE GHS Classifications of Regulated Chemicals [Advisory]

Classification

Flammable liquids	Category 2
Eye damage/irritation	Category 3
Carcinogenicity	Category 1
Toxic to reproduction	Category 1
Specific target organ toxicity - single exposure	Category 3
Specific target organ toxicity - repeated exposure	Category 1

Label elements

Pictogram



Signal word

Danger

Hazard statements

H225: Highly flammable liquid and vapour.
H320: Causes eye irritation.
H350: May cause cancer.

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H360: May damage fertility or the unborn child.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H372: Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash the contact area thoroughly after handling.
P201 + P202: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P270: Do not eat, drink or smoke when using this product.

Response

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice/ attention.

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P309 + P311: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage	P403 + P233 + P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool. P405: Store locked up.
Disposal	P501Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.
Other hazards	No data available

SECTION 3. Composition/information on ingredients

Substance

Ethanol

Contents: >= 99.90 %W/W

CAS-No. 64-17-5

Index-No. 603-002-00-5

EC-No. 200-578-6

Hazard statements *H225 H320 H350 H360 H335 H336
H372*

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

Description of necessary first-aid measures

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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.
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.

Most important symptoms/effects, acute and delayed

Refer to SECTION 11

SECTION 5. Firefighting measures

Suitable extinguishing media	Water spray, Foam, CO2, Dry powder.
Unsuitable extinguishing media	Water spray jet
Special hazards arising from the substance or mixture	Flash back possible over considerable distance. Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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SECTION 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.
Reference to other sections	Refer to section 8 and 13

SECTION 7. Handling and storage

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.
Requirements for storage areas and containers	Keep containers tightly closed in a cool, well-ventilated place.
Advice on common storage	No data available

SECTION 8. Exposure controls/personal protection

Components with workplace control parameters

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NATIONAL OCCUPATIONAL EXPOSURE LIMITS

Contains no substances with occupational exposure limit values.

Exposure controls

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

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.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Form Liquid

State of matter Liquid; at 20 ° C; 1,013 hPa

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Colour	Colourless
Odour	Alcohol-like
Odour Threshold	No data available
pH	7
Melting point/range	-114.1 ° C
Boiling point/boiling range	78.5 ° C
Flash point	16 ° C; closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Auto-ignition temperature	363 ° C
Lower explosion limit	3.3 %(V)
Upper explosion limit	19 %(V)
Relative vapour density	1.59
Density	0.788 g/cm ³ ; 20 ° C
Water solubility	Completely miscible, Completely soluble
Viscosity, dynamic	1.4 mPa.s

SECTION 10. Stability and reactivity

Reactivity	Stable under recommended storage conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Heating can release hazardous gases.

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Conditions to avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Materials to avoid	Oxidizing agents. Acids and bases
Hazardous decomposition products	Carbon oxides.

SECTION 11. Toxicological information

Acute oral toxicity	Ethanol: LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 401; GLP: no (literature value)
Acute inhalation toxicity	Ethanol: LC50 Mouse: 4 h; > 20 mg/l; (literature value)
Acute dermal toxicity	Ethanol: LD50 Dermal Rabbit: > 2,000 mg/kg; OECD Test Guideline 402; (literature value)
Skin irritation	Ethanol: Rabbit: Not irritating; OECD Test Guideline 404 (literature value)
Eye irritation	Ethanol: Rabbit: irritating OECD Test Guideline 405 (literature value)
Sensitisation	Ethanol: Maximisation Test; Guinea pig: Not sensitizing; OECD Test Guideline 406; (literature value)
Repeated dose toxicity	Causes damage to organs through prolonged or repeated exposure.

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Carcinogenicity	The product may cause cancer.
Mutagenicity	Ethanol: Ames test: Salmonella typhimurium; Not mutagenic; OECD Test Guideline 471; (literature value)
Further Information	May damage fertility or the unborn child.

SECTION 12. Ecological information

Toxicity to fish	Ethanol: static test; Leuciscus idus; 48 h; LC50; > 100 mg/l; OECD Test Guideline 203; (literature value)
Toxicity to daphnia and other aquatic invertebrates	Ethanol: static test; Daphnia magna (Water flea); 24 h; EC50; > 100 mg/l(literature value)
Toxicity to algae	Ethanol: static test; Chlorella pyrenoidosaEC50; > 100 mg/l; OECD Test Guideline 201; (literature value)
Toxicity to bacteria	Ethanol: Pseudomonas putida; 16 h; 6,500 mg/l; Toxicity to bacteria
Biodegradability	Ethanol: aerobic; > 70 %; 5 d; Readily biodegradable.; OECD Guideline 301 D; (literature value)
Mobility in soil	No data available
Results of PBT and vPvB	This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not

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assessment considered to be very persistent and very bioaccumulating (vPvB).

Chemical Oxygen Demand (COD) Ethanol:
ca.1,700 mg/g; Directive 84/449/EEC, C.9; GLP: no;

SECTION 13. Disposal considerations

Product Disposal should be in accordance with local, regional and national legislations.

SECTION 14. Transport information

ADR

UN number: 1170

Class: 3

Packaging group: II; F1;

Proper shipping name: ETHANOL SOLUTION

RID

UN number: 1170

Class: 3

Packaging group: II; F1

Proper shipping name: ETHANOL SOLUTION



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IMDG

UN number: 1170

Class: 3

EmS: F-E, S-D

Packaging group: II

Proper shipping name: ETHANOL SOLUTION

Marine pollutant Not a Marine Pollutant

ICAO/IATA

UN number : 1170

Class: 3

Packaging group: II

Proper shipping name: ETHANOL SOLUTION

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Ethyl alcohol
Pollution Category: Z

SECTION 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

USA TSCA Inventory

All chemical constituents are listed in: USA TSCA Inventory

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(See chapter 3)

Canadian Domestic Substances List (DSL)	All chemical constituents are listed in: Canadian Domestic Substances List (DSL) (See chapter 3)
Australian Inv. of Chem. Substances (AICS)	All chemical constituents are listed in: Australian Inv. of Chem. Substances (AICS) (See chapter 3)
New Zealand Inventory of Chemicals (NZIoC)	All chemical constituents are listed in: New Zealand Inventory of Chemicals (NZIoC) (See chapter 3)
Jap. Inv. of Exist. & New Chemicals (ENCS)	All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals (ENCS) (See chapter 3)
Japan. Industrial Safety & Health Law (ISHL)	All chemical constituents are listed in: Japan. Industrial Safety & Health Law (ISHL) (See chapter 3)
Korea. Existing Chemicals Inventory (KECI)	All chemical constituents are listed in: Korea. Existing Chemicals Inventory (KECI) (See chapter 3)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	All chemical constituents are listed in: Philippines Inventory of Chemicals and Chemical Substances (PICCS) (See chapter 3)
China Inv. Existing Chemical Substances (IECSC)	All chemical constituents are listed in: China Inv. Existing Chemical Substances (IECSC) (See chapter 3)

SECTION 16. Other information

Full text of H-Statements

- H225 Highly flammable liquid and vapour.
- H320 Causes eye irritation.
- H335 May cause respiratory irritation.



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- H336 May cause drowsiness or dizziness.
- H350 May cause cancer.
- H360 May damage fertility or the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.

All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The SDS only provides information regarding the health, safety and environmental hazards at the date of issue, to facilitate the safe receipt, use and handling of this product in the workplace and does not replace any product information or product specifications. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which this 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 SDS in the context within which this 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 with respect to 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 this product.

Although all reasonable efforts were exercised in the compilation of this SDS, Sasol does not expressly warrant the accuracy of, or assume any liability for incomplete information contained herein or any advice given. When this product is sold, risk passes to the purchaser in accordance with the specific terms and conditions of sale.

Industrial Safety and Health Act

- Dangerous/inflammable Substances.
- Dangerous or Harmful Substances subject to be Notified their names. (Article 57 of Act, appended table 9 of article 18 of Order).

Ethanol Business Act

- Ethanol with a 90 percent or higher alcoholic content.

Fire Service Act

- Category IV inflammable liquids, Alcohols.