

Safety Data Sheet

ETHANOL

Replaces date: 10/10/2013

Revision date: 20/05/2015

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

1.1. Product identifier

Trade name: ETHANOL
Formula: C₂H₅OH
Synonyms: etylalkohol
Other Information: Substance name Etanol

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

Recommended uses: See enclosed exposure scenarios for further information.

1.3. Details of the supplier of the safety data sheet

Supplier

Company: Borregaard AS
Address: P.O. Box 162
Zip code: 1701 Sarpsborg
Country: NORWAY
Phone: + 47 69 11 80 00
Fax: + 47 69 11 87 70
Contact person: Name: Nina Faye Haraldstad, E-mail: MSDS@borregaard.com

1.4. Emergency Telephone Number

+47 22 59 13 00 (National dept.for poisons information (Norway)) (24 h) +47 69 11 88 88 (Borregaard emergency no.) (24 h)
112 (Emergency) (24 h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

DPD-Classification: F;R11
CLP-classification: Flam. Liq. 2;H225 Eye Irrit. 2;H319
Most serious harmful effects: Highly flammable liquid and vapour. Causes serious eye irritation.

2.2. Label elements

Pictograms



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Signal word: Danger

Contains

Substance: Ethanol

Hazard Statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241+242 Use explosion-proof electrical/ventilating/lighting/{0}/equipment. Use only non-sparking tools.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303/361/353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370/378 In case of fire extinguish with water mist, dry chemical, foam or carbon dioxide.

P403/235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/Container (UK)

2.3. Other hazards

Flammable liquid.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS number	EC No	REACH Reg. No.	Concentration	Notes	DSD-Classification	CLP-classification
Ethanol	64-17-5	200-578-6	01-2119457610-43	95 - 100%		F,R11	Eye Irrit. 2 H335 Flam. Liq. 2 H225

Please see section 16 for the full text of R-phrases and H-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. In case of respiratory stop, administer artificial respiration/oxygen (but not the mouth-to-nose method) Call a POISON CENTER or doctor/physician.

Ingestion: Seek medical advice immediately. Do not induce vomiting. Wash out mouth thoroughly and drink 1-2 glasses of water in small sips.

Skin contact: Remove contaminated clothing, watch and jewellery. Wash the skin thoroughly with water and continue washing for a long time. Seek medical advice immediately.

Eye contact: Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist. Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.

General: When obtaining medical advice, show the safety data sheet or label.

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4.2. Most important symptoms and effects, both acute and delayed

Symptoms of poisoning include indisposition, nausea, headache, sweating.

4.3. Indication of any immediate medical attention and special treatment needed

In case of shortness of breath, give oxygen.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with powder, foam, carbon dioxide or water mist.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Burns with an invisible flame which increases risk in connection with fires. Explosive mixtures may form with air when heated/exposed to fire. Heating will induce a significant increase in pressure with a risk of bursting. Remove the pressurized cylinder from the danger area if it can be done without risk. Keep well away from the fire. Cool with a water stream if possible. Avoid inhalation of vapour and flue gases - seek fresh air.

5.3. Advice for fire-fighters

If there is a risk of exposure to vapour and flue gases, a self-contained breathing apparatus must be worn. Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment. Provide good ventilation. Wear suitable protective clothing. Wear safety goggles if there is a risk of eye splash. Wear respiratory protective equipment.

For emergency responders: Provide good ventilation. Wear suitable protective clothing. Wear safety goggles. Wear gloves.

6.2. Environmental precautions

Avoid unnecessary release to the environment. Do not discharge large quantities of concentrated spills and residue into drains. Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

6.3. Methods and material for containment and cleaning up

Rinse with water. Contain and absorb spill with sand or other absorbent, non-combustible material and transfer to suitable waste containers.

6.4. Reference to other sections

See section 13 for instructions on disposal.

SECTION 7: Handling and storage

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7.1. Precautions for safe handling

A safety shower must be available. Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment. All work must be carried out under well-ventilated conditions. Wash hands before breaks, before using restroom facilities, and at the end of work. Do not eat, drink or smoke during work.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry, cool, well-ventilated area. The product may ignite on contact with e.g. heat or a spark. Ground/bond container and receiving equipment.

7.3. Specific end use(s)

See enclosed exposure scenarios.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit: Contains no substances subject to reporting requirements

8.2. Exposure controls

Exposure controls: See enclosed exposure scenarios for further information.

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles.

Personal protective equipment, hand protection: Wear gloves.

Personal protective equipment, skin protection: Wear suitable protective clothing. Be aware when working in strong sunlight, see section 11.

Personal protective equipment, respiratory protection: In case of insufficient ventilation, wear respiratory protective equipment. Filter type: A.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

Heating hazards: Avoid heating and contact with ignition sources.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Liquid
Colour	Colourless
Odour	Characteristic
Solubility	Organic solvents. Water. Miscible with the following:
Explosive properties	
Oxidising properties	

Parameter	Value/unit	Remarks
pH (solution for use)	No data	
pH (concentrate)	No data	
Melting point	~ -113 °C	
Freezing point	No data	

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Initial boiling point and boiling range	No data	
Flash Point	~ 13 °C	
Evaporation rate	3.10	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	4.30 - 19 vol%	
Vapour pressure	44 mmHg	
Vapour density	1.59	
Relative density	No data	
Partition coefficient n-octanol/water	No data	
Auto-ignition temperature	422 °C	
Decomposition temperature	No data	
Viscosity	1.19 cSt	
Odour threshold	No data	

9.2 Other information

Parameter	Value/unit	Remarks
Density	790 kg/m ³	

Other Information: Solubility in water: Complete

SECTION 10: Stability and reactivity

10.1. Reactivity

The product may ignite on contact with e.g. heat or a spark.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Keep out of reach of children. Avoid heating and contact with ignition sources.

10.4. Conditions to avoid

Avoid heating and contact with ignition sources. Avoid direct sunlight.

10.5. Incompatible materials

Strong oxidisers.

10.6. Hazardous decomposition products

Product decomposes in fire conditions or when heated to high temperatures, and inflammable and toxic gases may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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- Acute toxicity - oral:** Ingestion may cause discomfort. The product releases organic solvent vapours. At high concentrations, the vapours may cause headache, dizziness, intoxication and possible unconsciousness.
- Acute toxicity - dermal:** Degrades and dries the skin. Repeated exposure may cause skin dryness or cracking.
- Acute toxicity - inhalation:** The product releases organic solvent vapours. At high concentrations, the vapours may cause headache, dizziness, intoxication and possible unconsciousness.
- Skin corrosion/irritation:** By prolonged contact, the product may dry the skin.
- Serious eye damage/eye irritation:** May cause eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Based on existing data, the classification criteria are deemed not to have been met.

12.2. Persistence and degradability

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Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			BOD	84%			

Readily biodegradable.

12.3. Bioaccumulative potential

No bioaccumulation expected.

12.4. Mobility in soil

Insoluble in the following: Water.

12.5. Results of PBT and vPvB assessment

The product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid discharge to drain or surface water. Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.

SECTION 14: Transport information

Land transport (ADR/RID)

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14.1. UN-No.:	1170	14.4. Packing group:	II
14.2. UN proper shipping name:	ETHANOL	14.5. Environmental hazards:	
14.3. Transport hazard class(es):	3		
Hazard label(s):	3		
Hazard identification number:	33	Tunnel restriction code:	D/E

Other Information:

Inland water ways transport (ADN)

14.1. UN-No.:	1170	14.4. Packing group:	II
14.2. UN proper shipping name:	ETHANOL	14.5. Environmental hazards:	
14.3. Transport hazard class(es):	3		
Hazard label(s):	3		
Environmentally hazardous in tank vessels:		Other Information:	

Sea transport (IMDG)

14.1. UN-No.:	1170	14.4. Packing group:	II
14.2. UN proper shipping name:	ETHANOL	14.5. Environmental hazards:	
14.3. Transport hazard class(es):	3	Environmental Hazardous Substance Name(s):	
Hazard label(s):	3		
EmS:	F-E, S-D	IMDG Code segregation group:	- None -

Other Information:

Air transport (ICAO-TI / IATA-DGR)

14.1. UN-No.:	1170	14.4. Packing group:	II
14.2. UN proper shipping name:	ETHANOL	14.5. Environmental hazards:	
14.3. Transport hazard class(es):	3		
Hazard label(s):	3	Other Information:	

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Not applicable.

SECTION 15: Regulatory information

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

Special Provisions: ADR/RID (2007).REACH (EC 1907/2006)ECHA FAQ 7.7GHS / CLP (EC NO1272/2008) GHS USA June, 2015.

15.2. Chemical Safety Assessment

Other Information: See enclosed exposure scenarios.

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SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.1.0	20/05/2015	Borregaard AS	NIHA

Other Information: Information given in this safety data sheet is in accordance with our information, and to the best of our knowledge, was correct on the last revision date. Information given is intended to present guidelines for safe handling, use, processing, storage, transport, disposal and discharge; it is not intended to be a guarantee or quality specification. It is the responsibility of the recipient of this safety data sheet to ensure that information given here is read and understood by all who use, handle, dispose of or in any way come in contact with the product.

Classification method: Category 2A (irritating to eyes)
OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Reference: REACH dossier

List of relevant H-statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

List of relevant R-phrases

R11 Highly flammable.

Document language: GB