

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

ETHANOL + 10% IPA HEATHPUMP / CAN 20 L

Version 7.3

Print Date 28.10.2017

Revision date / valid from 17.05.2017

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

1.1. Product identifier

Trade name : ETHANOL + 10% IPA HEATHPUMP / CAN 20 L

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

Use of the Substance/Mixture : Used as:, Solvent

Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : Brenntag Nordic A/S
Borupvang 5 B
DK 2750 Ballerup
Telephone : +45 43 29 28 00
Telefax : +45 43 29 27 00
E-mail address : SDS.DK@brenntag-nordic.com
Responsible/issuing person : Environment & Quality

1.4. Emergency telephone number

Emergency telephone number : In case of personal injury call:
Denmark: 82 12 12 12 Giftlinien, Bispebjerg Hospital
Finland: Poison Information Centre: (09) 471 977 (direct) or (09) 47 11 (exchange), open 24h/day
Norway: 22 59 13 00 Giftinformasjonen (døgnåpent)
Sweden: +46-8-331231 Giftinformationscentralen (24 hour service)
Outside these countries: Please call your local emergency services

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008

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Hazard class	Hazard category	Target Organs	Hazard statements
Flammable liquids	Category 2	---	H225
Eye irritation	Category 2	---	H319

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

Most important adverse effects

Human Health	:	Chronic exposure damages the brain and the central nervous system. Causes serious eye irritation.
Physical and chemical hazards	:	Flammable. Heating may produce combustible vapour which can form explosive mixture with air., To be stored as flammable liquid., The material can accumulate static charge and can therefore cause electrical ignition.
Potential environmental effects	:	According to available data, this product is not harmful to the environment.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard symbols	:	 
Signal word	:	Danger
Hazard statements	:	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.
Precautionary statements	:	
Prevention	:	P264 Wash skin thoroughly after handling. P280 Wear protective gloves/ eye protection/ face protection. P233 Keep container tightly closed. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	:	P337 + P313 If eye irritation persists: Get medical advice/ attention.

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Hazardous components which must be listed on the label:

- ethanol
- propan-2-ol

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.
Contains organic solvents.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)	
		Hazard class / Hazard category	Hazard statements
ethanol			
Index-No. : 603-002-00-5	>= 85	Flam. Liq.2 Eye Irrit.2	H225 H319
CAS-No. : 64-17-5			
EC-No. : 200-578-6			
EU REACH- : 01-2119457610-43-xxxx			
Reg. No.			
propan-2-ol			
Index-No. : 603-117-00-0	<= 10	Flam. Liq.2 Eye Irrit.2 STOT SE3	H225 H319 H336
CAS-No. : 67-63-0			
EC-No. : 200-661-7			
EU REACH- : 01-2119457558-25-xxxx			
Reg. No.			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

- If inhaled : Move to fresh air. If symptoms occur, call a physician.
- In case of skin contact : Take off all contaminated clothing immediately. Wash off with soap and water.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Remove contact lenses. If symptoms persist, call a physician.
- If swallowed : Rinse mouth with water. Drink 1 or 2 glasses of water. Consult a physician.

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

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Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : See Section 11 for more detailed information on health effects and symptoms.

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

Treatment : No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : water spray, powder, Alcohol-resistant foam, Carbon dioxide (CO₂)

Unsuitable extinguishing media : Water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Highly flammable, Vapours even below room temperatures can form explosive gas-air mixtures. Contaminated clothes are a fire risk.

5.3. Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

Further advice : Cool closed containers exposed to fire with water spray. Risk of closed containers bursting if strongly heated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : For personal protection see section 8.

6.2. Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil. In case of large spillage contact the local authority.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Stop the leakage if it can be done without danger. Remove all sources of ignition. Use personal protective equipment. No sparking tools should be used. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). The surface of the spill can be covered in order to

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reduce vaporization and thereby the fire hazard.

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapour. Avoid contact with skin and eyes. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs.

Requirements for storage areas and containers : Storage must follow the regulations for flammable liquids: Class I-2 (DK only). Unsuitable materials for containers: polyethylene; Polypropylene

Advice on protection against fire and explosion : Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Use only in an area containing explosion proof equipment.

7.3. Specific end use(s)

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Component:	ethanol	CAS-No. 64-17-5
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Other Occupational Exposure Limit Values

Denmark. Danish List of Organic Solvents, Danish Labor Inspectorate, Threshold Limit Values (TLV):
1.000 ppm

Denmark. Exposure Limit Values, Threshold Limit Values (TLV):

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1.000 ppm, 1.900 mg/m³

Component:	propan-2-ol	CAS-No. 67-63-0
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Other Occupational Exposure Limit Values

Denmark. Danish List of Organic Solvents, Danish Labor Inspectorate, Threshold Limit Values (TLV):
200 ppm

Denmark. Exposure Limit Values, Threshold Limit Values (TLV):
200 ppm, 490 mg/m³

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation.

Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapors.

Exposure may primarily be reduced by choice of working method and technical measures.

Personal protective equipment

Respiratory protection

Advice : In case of insufficient ventilation, wear suitable respiratory equipment.
Recommended Filter type:A

Hand protection

Advice : Protective gloves

Material : Nitrile rubber
Break through time : 240 min
Glove thickness : 0,5 mm

Eye protection

Advice : Safety glasses

Skin and body protection

Advice : Wear suitable protective clothing.

Environmental exposure controls

General advice : The product should not be allowed to enter drains, water courses or the soil.
In case of large spillage contact the local authority.

ETHANOL + 10% IPA HEATHPUMP / CAN 20 L**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Form	: liquid
Colour	: colourless
Odour	: alcohol-like
Odour Threshold	: no data available
pH	: no data available
Freezing point/range	: ca. -112 °C
Boiling point/boiling range	: ca. 78 °C
Flash point	: ca. 12 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: 15 %(V)
Lower explosion limit	: 2 %(V)
Vapour pressure	: ca. 59 hPa
Relative vapour density	: no data available
Density	: 0,80 g/cm ³ (15 °C)
Water solubility	: miscible
Partition coefficient: n-octanol/water	: log Kow < 1
Auto-ignition temperature	: ca. 425 °C
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Explosivity	: no data available
Oxidizing properties	: no data available

9.2. Other information

No further information available.

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SECTION 10: Stability and reactivity
10.1. Reactivity

Advice : No information available.

10.2. Chemical stability

Advice : No decomposition if stored and applied as directed.
No further information available.

10.3. Possibility of hazardous reactions

Hazardous reactions : No information available.

10.4. Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5. Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products : No information available.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Data for the product
Acute toxicity
Oral

Cause pain in mouth and throat, nausea, vomiting, dizziness, headache and risk of unconsciousness.

Inhalation

Vapours may cause irritation, headache, dizziness and may have narcotic effects and other central nervous effects.

Dermal

no data available

Irritation
Skin

Result : Prolonged skin contact may cause skin irritation.

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Result : Causes serious eye irritation.

Sensitisation

no data available

CMR effects**CMR Properties**

Carcinogenicity : no data available

Mutagenicity : no data available

Reproductive toxicity : no data available

Specific Target Organ Toxicity**Single exposure**

no data available

Repeated exposure

no data available

Other toxic properties**Repeated dose toxicity**

no data available

Aspiration hazard

no data available

Further information

Experience with human exposure : Contains organic solvents.
Harmful by inhalation.
Chronic exposure damages the brain and the central nervous system.,

Component: ethanol CAS-No. 64-17-5

Acute toxicity**Oral**

LD50 : 10470 mg/kg (Rat, male and female) (OECD Test Guideline 401)

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Cause pain in mouth and throat, nausea, vomiting, dizziness, headache and risk of unconsciousness.

Inhalation

LC50 : 124,7 mg/l (Rat, male and female; 4 h; vapour) (OECD Test Guideline 403)
 May cause pain in nose and throat, nausea, dizziness, headache, deteriorate reactivity and at high concentration unconsciousness.

Dermal

LD50 : > 10000 mg/kg (Rabbit) (OECD Test Guideline 402)

Component:	propan-2-ol	CAS-No. 67-63-0
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Acute toxicity

Oral

LD50 : 5280 mg/kg (Rat)

Inhalation

LC50 : 72,6 mg/l (Rat; 4 h)
 LC50 : 47,5 mg/l (Rat, female; 8 h)

Dermal

LD50 : 12800 mg/kg (Rabbit)

SECTION 12: Ecological information
12.1. Toxicity

Component:	ethanol	CAS-No. 64-17-5
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Acute toxicity

Fish

LC50 : 8150 mg/l (Leuciscus idus melanotus; 48 h)
 LC50 : 1100 mg/l (Alburnus alburnus; 96 h)

Toxicity to daphnia and other aquatic invertebrates

LC50 : 5012 mg/l (Ceriodaphnia dubia (water flea); 48 h) (static test;

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ASTM E 729-80)Fresh water

algae

EC50 : 275 mg/l (Chlorella vulgaris (Fresh water algae); 72 h) (static test; End point: Growth rate; OECD Test Guideline 201)Fresh water

Bacteria

EC0 : 6500 mg/l (Pseudomonas putida; 16 h)

Component:	propan-2-ol	CAS-No. 67-63-0
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Acute toxicity

Fish

LC50 : 9640 mg/l (Pimephales promelas; 96 h)

Toxicity to daphnia and other aquatic invertebrates

EC50 : 13299 mg/l (Daphnia magna; 48 h)

algae

EC50 : > 1000 mg/l (Desmodesmus subspicatus (green algae); 72 h)

Bacteria

EC10 : 5175 mg/l (Pseudomonas putida; 18 h) (DIN 38412)
 EC50 : > 1000 mg/l (activated sludge) Respiration inhibition of activated sludge

12.2. Persistence and degradability

Data for the product

Persistence and degradability

Biodegradability

Result : Expected to be readily biodegradable.

12.3. Bioaccumulative potential

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Data for the product
Bioaccumulation

Result : Bioaccumulation is not expected.

12.4. Mobility in soil
Data for the product
Mobility

Result : no data available

12.5. Results of PBT and vPvB assessment
Data for the product
Results of PBT and vPvB assessment

Result : no data available

12.6. Other adverse effects
Data for the product
Additional ecological information

Result : The product is mobile in water environment.

SECTION 13: Disposal considerations
13.1. Waste treatment methods

- Product : Eliminate waste in conditions authorized by the regulations. Store waste in containers provided for this purpose. Do not dump in drains, water sheets or the ground.
- Contaminated packaging : Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
- European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

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1987

14.2. UN proper shipping name

ADR : ALCOHOLS SOLUTION, N.O.S.
(Ethanol, Isopropanol)
Special Provision 640D

RID : ALCOHOLS SOLUTION, N.O.S.
(Ethanol, Isopropanol)
Special Provision 640D

IMDG : ALCOHOLS SOLUTION, N.O.S.
(Ethanol, Isopropanol)

14.3. Transport hazard class(es)

ADR-Class : 3
(Labels; Classification Code; Hazard
identification No; Tunnel restriction code) 3; F1; 33; (D/E)

RID-Class : 3
(Labels; Classification Code; Hazard
identification No) 3; F1; 33

IMDG-Class : 3
(Labels; EmS) 3; F-E, S-D

14.4. Packaging group

ADR : II
RID : II
IMDG : II

14.5. Environmental hazards

Environmentally hazardous according to ADR : no
Environmentally hazardous according to RID : no
Marine Pollutant according to IMDG-Code : no

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

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Data for the product

Other regulations : Only persons, who are thoroughly instructed in the dangerous properties and the necessary safety precautions of the substance, are allowed to work with it.

Not to be sold or handed over to persons under 18 years of age.

15.2. Chemical safety assessment

no data available

SECTION 16: Other information
Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Abbreviations and Acronyms

BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit

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PBT	persistent, bioaccumulative and toxic
PNEC	predicted no-effect concentration
STOT	specific target organ toxicity
SVHC	substance of very high concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very persistent and very bioaccumulative

Key literature references : Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for product classification : The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

Hints for trainings : The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

|| Indicates updated section.

The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.