

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : Bio Ethanol
Revision date : 30.04.2019
Print date : 19-06-2019

Version (Revision) : 2.0.3 (2.0.2)

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

1.1 Product identifier

Bio Ethanol (140010)

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

Relevant identified uses

Fuel for ethanol/gel fireplaces. Consumer uses: Private households (= general public = consumers)

Uses advised against

This product should not be used for purposes other than the applications referred to above.

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

Sel Chemie BV

Street : Broekstraat 23

Postal code/city : 7122 MN Aalten

Telephone : +31 (0)543-471956

Telefax : +31 (0)543-476600

Information contact : Email: MSDS@selchemie.com

1.4 Emergency telephone number

Members of the public seeking specific information on poisons should contact: In England and Wales: NHS 111 - dial 111, in Scotland: NHS 24 - dial 111 Ireland +353 (0)1 8092566 or +353 (0)1 8379964 National Poisons Information Centre

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

Flam. Liq. 2 ; H225 - Flammable liquids : Category 2 ; Highly flammable liquid and vapour.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Flame (GHS02) · Exclamation mark (GHS07)

Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

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P403+P235 and easy to do. Continue rinsing.
P501 Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local / national regulations.

2.3 Other hazards

This material can accumulate static charge by flow or agitation and can be ignited by static discharge. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

ETHANOL ; REACH registration No. : 01-2119457610-43 ; EC No. : 200-578-6; CAS No. : 64-17-5

Weight fraction : ≥ 90 %
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319

PROPAN-2-OL ; REACH registration No. : 01-2119457558-25 ; EC No. : 200-661-7; CAS No. : 67-63-0

Weight fraction : $< 2,5$ %
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319 STOT SE 3 ; H336

BUTANONE ; REACH registration No. : 01-2119457290-43 ; EC No. : 201-159-0; CAS No. : 78-93-3

Weight fraction : $< 2,5$ %
Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319 STOT SE 3 ; H336

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH

None

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH

None

Additional information

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Observe risk of aspiration if vomiting occurs. If unconscious place in recovery position and seek medical advice. If breathing is irregular or stopped, administer artificial respiration. Remove casualty to fresh air and keep warm and at rest.

Following inhalation

Remove casualty to fresh air and keep warm and at rest. In all cases of doubt, or when symptoms persist, seek medical attention.

In case of skin contact

Wash immediately with: Water In all cases of doubt, or when symptoms persist, seek medical attention. Change contaminated, saturated clothing. Wash contaminated clothing prior to re-use.

After eye contact

Rinse immediately carefully and thoroughly with eye-bath or water. In all cases of doubt, or when symptoms persist, seek medical attention.

After ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

The following symptoms may occur: Headache Dizziness Nausea Diminished responsiveness Danger of irritation to eyes, nose, throat and the air passages. depression of central nervous system Cardiac arrhythmias Drowsiness Vomiting Dilated pupils

4.3 Indication of any immediate medical attention and special treatment needed

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Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water mist alcohol resistant foam ABC-powder BC-powder Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide Carbon dioxide (CO₂)

5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction. Remove all sources of ignition. Use only antistatically equipped (spark-free) tools.

For non-emergency personnel

Protective equipment

Use personal protection equipment. Wear closed protection glasses. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Emergency procedures

If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Use foam on spills to minimise vapours. Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

For cleaning up

Suitable material for taking up: Sand Kieselguhr Limestone powder Collect in closed and suitable containers for disposal. Delivery to an approved waste disposal company. The contaminated area should be cleaned up immediately with: Water

6.4 Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage



7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Use only antistatically equipped (spark-free) tools. Provide earthing of containers, equipment, pumps and ventilation facilities. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Measures to prevent aerosol and dust generation

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During filling, metering and sampling should be used if possible: Closed devices

Environmental precautions

Do not empty into drains.

Specific requirements or handling rules

Remove contaminated, saturated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Protect against direct sunlight. Keep container tightly closed in a cool, well-ventilated place. Ensure adequate ventilation of the storage area. Suitable container/equipment material: Stainless steel Aluminium Iron. Unsuitable container/equipment material: No data available

Hints on joint storage

Keep away from

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Oxidizing agent Strong acid

7.3 Specific end use(s)

Fuel for ethanol/gel fireplaces.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

ETHANOL ; CAS No. : 64-17-5

Limit value type (country of origin) : Exposure Limit (8h) (NL)

Limit value : 260 mg/m³ / 136 ppm

Remark : H

Version : 01-01-2007

Limit value type (country of origin) : Exposure Limit (15min) (NL)

Limit value : 1900 mg/m³ / 992 ppm

Remark : H

Version : 01-01-2007

PROPAN-2-OL ; CAS No. : 67-63-0

Limit value type (country of origin) : Exposure Limit (8h) (NL)

Limit value : 200 ppm

Version :

Limit value type (country of origin) : Exposure Limit (15min) (NL)

Limit value : 400 ppm

Version :

BUTANONE ; CAS No. : 78-93-3

Limit value type (country of origin) : STEL (EC)

Limit value : 300 ppm / 900 mg/m³

Version : 08-06-2000

Limit value type (country of origin) : TWA (EC)

Limit value : 200 ppm / 600 mg/m³

Version : 08-06-2000

Limit value type (country of origin) : Exposure Limit (8h) (NL)

Limit value : 590 mg/m³ / 197 ppm

Version :

Limit value type (country of origin) : Exposure Limit (15min) (NL)

Limit value : 900 mg/m³ / 300 ppm

Version :

8.2 Exposure controls

Appropriate engineering controls

Use only in well-ventilated areas. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Provide earthing of containers, equipment, pumps and ventilation facilities. Use only antistatically equipped (spark-free) tools.

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Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Personal protection equipment



Eye/face protection



Suitable eye protection
Eye glasses with side protection

Skin protection

Hand protection



Suitable gloves type : The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material : Butyl caoutchouc (butyl rubber) Tetrafluoroethylene

Unsuitable material : NR (natural rubber, natural latex) PVA (Polyvinyl alcohol) PVC (polyvinyl chloride)

Required properties : liquid-tight.

Remark : DIN-/EN-Norms DIN EN 420 EN ISO 374

Body protection

Protective clothing. Chemical resistant safety shoes

Remark : Immediately remove any contaminated clothing, shoes or stockings. Wash contaminated clothing prior to re-use.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Suitable respiratory protection apparatus Full-/half-/quarter-face masks (DIN EN 136/140) Filtering device (full mask or mouthpiece) with filter: A

General health and safety measures

Wash hands before breaks and after work.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Liquid

Colour : colourless

Odour : Alcohol

Safety relevant basis data

Melting point/melting range : No data available

Initial boiling point and boiling range : No data available

Initial boiling point and boiling range : (1013 hPa) No data available

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Decomposition temperature :	No data available
Freezing point :	No data available
Flash point :	10 - 15 °C
Ignition temperature :	No data available
Lower explosion limit :	Vol-%
Upper explosion limit :	Vol-%
Vapour pressure : (20 °C)	No data available
Evaporation rate :	No data available
Evaporation rate (n-butylacetate = 1) :	No data available
Density : (15 °C)	0,8 - 0,82 g/cm ³
Water solubility : (20 °C)	100 Wt %
pH :	No data available
log P O/W :	No data available
Viscosity : (20 °C)	No data available
Odour threshold :	No data available
Relative vapour density : (20 °C)	> 1 (air = 1)
Flammable gases :	No data available.
Oxidising liquids :	Not oxidising.
Explosive properties :	Not applicable.

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction. This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

10.2 Chemical stability

Stable under normal conditions of use

10.3 Possibility of hazardous reactions

Violent reaction with: Oxidising agent, strong. Strong acid

10.4 Conditions to avoid

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment). Keep away from sources of ignition - No smoking. Use only antistatically equipped (spark-free) tools.

10.5 Incompatible materials

Violent reaction with: Oxidizing agent. Strong acid

10.6 Hazardous decomposition products

Carbon monoxide Carbon dioxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

Acute oral toxicity

Parameter :	LD50 (ETHANOL ; CAS No. : 64-17-5)
Exposure route :	Oral
Species :	Rat
Effective dose :	10470 mg/kg bw
Method :	OECD 401
Parameter :	LD50 (PROPAN-2-OL ; CAS No. : 67-63-0)
Exposure route :	Oral
Species :	Rat

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Effective dose : 5840 mg/kg
Test result : Minimally Toxic.
Method : OECD 401
Parameter : LD50 (BUTANONE ; CAS No. : 78-93-3)
Exposure route : Oral
Species : Rat
Effective dose : 2193 mg/kg bw
Method : OECD 423

Acute dermal toxicity

Parameter : LD50 (PROPAN-2-OL ; CAS No. : 67-63-0)
Exposure route : Dermal
Species : Rabbit
Effective dose : 13900 mg/kg
Test result : Minimally Toxic.
Method : OECD 402
Parameter : LD50 (BUTANONE ; CAS No. : 78-93-3)
Exposure route : Dermal
Species : Rabbit
Effective dose : ≥ 10 ml/kg bw
Exposure time : 24 h
Method : OECD 402

Acute inhalation toxicity

Parameter : LC50 (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Inhalation
Species : Rat
Effective dose : 124,7 mg/l
Exposure time : 4 h
Method : OECD 403
Parameter : LC50 (PROPAN-2-OL ; CAS No. : 67-63-0)
Exposure route : Inhalation
Species : Rat
Effective dose : > 25000 mg/m³
Exposure time : 6 h
Test result : Minimally Toxic.
Method : OECD 403

Irritant and corrosive effects

Primary irritation to the skin

Parameter : Primary irritation to the skin (ETHANOL ; CAS No. : 64-17-5)
Species : Rabbit
Exposure time : 24 h
Result : Not an irritant
Method : OECD 404
Parameter : Primary irritation to the skin (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Rabbit
Exposure time : 4 h
Result : Not an irritant
Parameter : Primary irritation to the skin (BUTANONE ; CAS No. : 78-93-3)
Species : Rabbit
Exposure time : 4 h
Result : Not an irritant
Method : OECD 404
Result : Not an irritant.

Irritation to eyes

Parameter : Irritation to eyes (ETHANOL ; CAS No. : 64-17-5)
Species : Rabbit
Exposure time : 14 day

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Result : Irritant
Method : OECD 405
Parameter : Irritation to eyes (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Rabbit
Exposure time : 24 h
Result : Irritant
Method : OECD 405
Parameter : Irritation to eyes (BUTANONE ; CAS No. : 78-93-3)
Species : Rabbit
Exposure time : 24 h
Result : Irritant
Method : OECD 405
Result : Causes serious eye irritation.

Sensitisation

In case of skin contact

Parameter : Skin sensitisation (ETHANOL ; CAS No. : 64-17-5)
Species : Mouse
Result : Not sensitising.
Method : OECD 429
Parameter : Skin sensitisation (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Guinea pig
Result : Not sensitising.
Method : OECD 406
Parameter : Skin sensitisation (BUTANONE ; CAS No. : 78-93-3)
Species : Guinea pig
Result : Not sensitising.
Method : OECD 406

In case of inhalation

Parameter : Sensitisation to the respiratory tract (ETHANOL ; CAS No. : 64-17-5)
Result : Not sensitising.

Repeated dose toxicity (subacute, subchronic, chronic)

Subacute oral toxicity

Parameter : LOAEL(C) (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Oral
Species : Rat
Effective dose : 3160 mg/kg
Exposure time : 98 day
Method : OECD 408

Subacute inhalation toxicity

Parameter : LOAEC (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Inhalation
Species : Rat
Effective dose : 1,3 mg/l

Additional information

Specific effects: Frequently or prolonged contact with skin may cause dermal irritation. Gastrointestinal complaints
Causes damage to liver through prolonged or repeated exposure if swallowed. May cause damage to heart through prolonged or repeated exposure if swallowed. Ingestion causes nausea, weakness and central nervous system effects.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

Parameter : NOAEL(C) (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Oral
Species : Rat
Effective dose : > 3000 Mg/kg bw/day
Exposure time : 728 day
Test result : Negative.

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Method : OECD 451
Parameter : NOAEC (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Inhalation
Species : Rat
Effective dose : >= 1,3 ppm
Exposure time : 728
Test result : Negative.
Method : OECD 453
Parameter : NOEL(C) (BUTANONE ; CAS No. : 78-93-3)
Exposure route : Inhalation
Species : Rat
Effective dose : 5000 ppm
Exposure time : 728 day
Test result : Negative.
Method : OECD 451

Assessment/classification

This substance does not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Germ cell mutagenicity

In vitro mutagenicity

Parameter : Gene-mutations mammalian cells (ETHANOL ; CAS No. : 64-17-5)
Species : Mouse lymphoma cells
Test result : Negative.
Method : OECD 476
Parameter : Gene-mutations microorganisms (BUTANONE ; CAS No. : 78-93-3)
Test result : Negative.
Method : OECD 471 (Ames test)
Parameter : Gene-mutations microorganisms (PROPAN-2-OL ; CAS No. : 67-63-0)
Test result : Negative.
Method : OECD 471 (Ames test)
Parameter : Gene-mutations mammalian cells (PROPAN-2-OL ; CAS No. : 67-63-0)
Test result : Negative.
Method : OECD 476

In vivo mutagenicity

Parameter : Chromosomal aberrations (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Oral
Species : Mouse
Exposure time : 5 day
Test result : Negative.
Method : OECD 478
Parameter : In vivo mutagenicity (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Mouse
Test result : Negative.
Method : OECD 474
Parameter : In vivo mutagenicity (BUTANONE ; CAS No. : 78-93-3)
Species : Mouse
Test result : Negative.
Method : OECD 474

Assessment/classification

This substance does not meet the criteria for classification as CMR category 1A or 1B according to CLP.

Reproductive toxicity

Adverse effects on sexual function and fertility

Parameter : NOAEL(C) (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Oral
Species : Mouse
Effective dose : 20700 mg/kg
Exposure time : 118 day

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Test result : Negative.
Method : OECD 416
Parameter : NOAEL(C) (PROPAN-2-OL ; CAS No. : 67-63-0)
Exposure route : Oral
Effective dose : 853 Mg/kg bw/day
Exposure time : 21 day
Test result : Negative.
Method : OECD 415
Parameter : NOAEL(C) (BUTANONE ; CAS No. : 78-93-3)
Species : Pig
Effective dose : 1644 - 1771 Mg/kg bw/day
Test result : Negative.
Method : OECD 416

Adverse effects on developmental toxicity

Parameter : NOAEL(C) (ETHANOL ; CAS No. : 64-17-5)
Exposure route : Inhalation
Species : Rat
Effective dose : >= 20000 ppm
Exposure time : 20 day
Test result : Negative.
Method : OECD 414
Parameter : NOAEL(C) (PROPAN-2-OL ; CAS No. : 67-63-0)
Exposure route : Oral
Species : Rat
Effective dose : 400 Mg/kg bw/day
Exposure time : 10 day
Test result : Negative.
Method : OECD 414
Parameter : NOAEL(C) (BUTANONE ; CAS No. : 78-93-3)
Species : Rat
Effective dose : 1002 ppm
Exposure time : 10 day
Test result : Negative.
Method : OECD 414

Assessment/classification

This substance does not meet the criteria for classification as CMR category 1A or 1B according to CLP.

STOT-repeated exposure

STOT RE 1 and 2

Parameter : STOT RE 1 and 2 (PROPAN-2-OL ; CAS No. : 67-63-0)
Exposure route : Rat
Effective dose : 5000 ppm
Exposure time : 728 day
Test result : Negative.
Parameter : STOT RE 1 and 2 (BUTANONE ; CAS No. : 78-93-3)
Exposure route : Rat
Effective dose : 5041 ppm
Exposure time : 91 day
Test result : Negative.

SECTION 12: Ecological information

12.1 Toxicity

The substance/mixture does not fulfill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

Aquatic toxicity

Acute (short-term) fish toxicity

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Parameter : LC50 (ETHANOL ; CAS No. : 64-17-5)
Species : Pimephales promelas (fathead minnow)
Effective dose : 15300 mg/l
Exposure time : 96 h
Parameter : LC50 (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Pimephales promelas (fathead minnow)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 9640 - 10000 mg/l
Exposure time : 96 h
Method : OECD 203
Parameter : LC50 (BUTANONE ; CAS No. : 78-93-3)
Species : Pimephales promelas (fathead minnow)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 2993 mg/l
Exposure time : 96 h
Method : OECD 203

Chronic (long-term) fish toxicity

Parameter : ChV (ETHANOL ; CAS No. : 64-17-5)
Species : Fish
Effective dose : 245 mg/l
Exposure time : 30 day

Acute (short-term) daphnia toxicity

Parameter : LC50 (ETHANOL ; CAS No. : 64-17-5)
Species : Ceriodaphnia dubia
Effective dose : 5012 mg/l
Exposure time : 48 h
Parameter : EC50 (BUTANONE ; CAS No. : 78-93-3)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 308 mg/l
Exposure time : 48 h
Method : OECD 202
Parameter : LC50 (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : > 10000 mg/l
Exposure time : 24 h
Method : OECD 202

Chronic (long-term) daphnia toxicity

Parameter : NOEC (ETHANOL ; CAS No. : 64-17-5)
Species : Daphnia magna (Big water flea)
Effective dose : 9,6 mg/l
Exposure time : 9 day
Parameter : NOEC (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 2344 µmol/l
Exposure time : 16 day

Acute (short-term) algae toxicity

Parameter : EC50 (ETHANOL ; CAS No. : 64-17-5)
Species : Chlorella vulgaris
Effective dose : 275 mg/l
Exposure time : 3 day
Method : OECD 201
Parameter : ErC50 (BUTANONE ; CAS No. : 78-93-3)
Species : Pseudokirchneriella subcapitata
Evaluation parameter : Acute (short-term) algae toxicity

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Effective dose : 1972 mg/l
Exposure time : 72 h
Method : OECD 201
Parameter : LOEC (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Algae
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : 1000 mg/l
Exposure time : 8 day

Bacteria toxicity

Parameter : EC50 (ETHANOL ; CAS No. : 64-17-5)
Species : Paramecium caudatum
Effective dose : 5800 mg/l
Exposure time : 4 h
Parameter : Bacteria toxicity (BUTANONE ; CAS No. : 78-93-3)
Species : Pseudomonas putida
Effective dose : 1150 mg/l
Exposure time : 16 h
Parameter : Bacteria toxicity (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Pseudomonas putida
Effective dose : 1050 mg/l
Exposure time : 16 h
Parameter : EC50 (PROPAN-2-OL ; CAS No. : 67-63-0)
Species : Bacteria toxicity
Effective dose : 41676 mg/l
Exposure time : 30 min

12.2 Persistence and degradability

Abiotic degradation

Photo-chemical elimination

Parameter : Photo-chemical elimination (ETHANOL ; CAS No. : 64-17-5)
Species : Photo-chemical elimination
Effective dose : 500000 cm³
Exposure time : 40 h

Biodegradation

Parameter : Biodegradation (ETHANOL ; CAS No. : 64-17-5)
Inoculum : Degree of elimination
Effective dose : 84 %
Exposure time : 20 day
Evaluation : Biodegradable.
Parameter : Biodegradation (BUTANONE ; CAS No. : 78-93-3)
Inoculum : Degree of elimination
Effective dose : 98 %
Exposure time : 28 day
Method : OECD 301D
Parameter : Biodegradation (PROPAN-2-OL ; CAS No. : 67-63-0)
Inoculum : Degree of elimination
Effective dose : 53 %
Exposure time : 5 day
Evaluation : Biodegradable.
Parameter : Biodegradation (PROPAN-2-OL ; CAS No. : 67-63-0)
Inoculum : Degree of elimination
Effective dose : 95 %
Exposure time : 21 day
Method : OECD 301E

Biodegradable.

12.3 Bioaccumulative potential

Parameter : Bioconcentration factor (BCF) (ETHANOL ; CAS No. : 64-17-5)

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Concentration : Cyprinus carpio (Common Carp)
1 - 4,5
72 h
Parameter : Bioconcentration factor (BCF) (PROPAN-2-OL ; CAS No. : 67-63-0)
Concentration : 3
Parameter : Partition coefficient n-octanol /water (log P O/W) (ETHANOL ; CAS No. : 64-17-5)
Concentration : -0,35
Parameter : Partition coefficient n-octanol /water (log P O/W) (PROPAN-2-OL ; CAS No. : 67-63-0)
Concentration : 0,05
Parameter : Partition coefficient: n-octanol/water (BUTANONE ; CAS No. : 78-93-3)
Concentration : 0,3

Assessment/classification

No indication of bioaccumulation potential.

12.4 Mobility in soil

Adsorption/Desorption

Parameter : Soil (ETHANOL ; CAS No. : 64-17-5)
Effective dose : 13,7 %
Parameter : Water (ETHANOL ; CAS No. : 64-17-5)
Effective dose : 33,1 %
Parameter : Air (ETHANOL ; CAS No. : 64-17-5)
Effective dose : 53,2 %
Parameter : Sediment (ETHANOL ; CAS No. : 64-17-5)
Effective dose : 0,1 %
Parameter : Log KOC (PROPAN-2-OL ; CAS No. : 67-63-0)
Effective dose : 1,5
Parameter : Log KOC (BUTANONE ; CAS No. : 78-93-3)
Effective dose : 1,53

Assessment/classification

If product enters soil, it will be mobile and may contaminate groundwater.

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Other adverse effects

Contains the following fluorinated greenhous gas (chemical name): None
Contains the following substances that deplete the ozone layer: None
If product enters soil, it will be mobile and may contaminate groundwater.

12.7 Additional ecotoxicological information

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Delivery to an approved waste disposal company. Handle contaminated packages in the same way as the substance itself. Do not allow to enter into surface water or drains.

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code : 15 01 02* plastic packaging
Waste code : 15 01 10* packaging containing residues of or contaminated by dangerous substances
Waste code : 13 07 03* other fuels (including mixtures)

SECTION 14: Transport information

14.1 UN number

UN 1170

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14.2 UN proper shipping name

Land transport (ADR/RID)

ETHANOL, SOLUTION

Sea transport (IMDG)

ETHANOL, SOLUTION

Air transport (ICAO-TI / IATA-DGR)

ETHANOL, SOLUTION

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es) : 3
Classification code : F1
Hazard identification number (Kemler No.) : 33
Tunnel restriction code : D/E
Special provisions : LQ 11 · E 2
Hazard label(s) : 3

Sea transport (IMDG)

Class(es) : 3
EmS-No. : F-E / S-D
Special provisions : LQ 11 · E 2
Hazard label(s) : 3

Air transport (ICAO-TI / IATA-DGR)

Class(es) : 3
Special provisions : E 2
Hazard label(s) : 3

14.4 Packing group

II

14.5 Environmental hazards

Land transport (ADR/RID) : No

Sea transport (IMDG) : No

Air transport (ICAO-TI / IATA-DGR) : No

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU legislation

Other regulations (EU)

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) The product is classified and labelled according to EC directives or corresponding national laws.

Directive 2010/75/EU on industrial emissions

This chemical is a VOC according to 2010/75/EC.

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds

This chemical is a VOC according to 2004/42/EC.

National regulations

Water hazard class (WGK)

slightly hazardous to water (WGK 1) Classification according to VwVwS, Annex 4.

Additional information

ICPE code: 4331

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SZW-Lijst

Bevat stof die wordt aangemerkt als 'kankerverwekkend' in de SZW-lijst: ETHANOL; Cas nr: 64-17-5
Bevat stof die wordt aangemerkt als 'voor de vruchtbaarheid giftig' in de SZW-lijst: ETHANOL; Cas nr: 64-17-5
Bevat stof die wordt aangemerkt als 'voor de ontwikkeling schadelijk' in de SZW-lijst: ETHANOL; Cas nr: 64-17-5
Bevat stof die wordt aangemerkt als 'kan schadelijk zijn via de borstvoeding' in de SZW-lijst: ETHANOL; Cas nr: 64-17-5

15.2 Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

16.1 Indication of changes

None

16.2 Abbreviations and acronyms

a.i. = Active ingredient
ACGIH = American Conference of Governmental Industrial Hygienists (US)
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road
AFFF = Aqueous Film Forming Foam
AISE = International Association for Soaps, Detergents and Maintenance Products (joint project of AISE and CEFIC)
AOAC = AOAC International (formerly Association of Official Analytical Chemists)
aq. = Aqueous
ASTM = American Society of Testing and Materials (US)
atm = Atmosphere(s)
B.V. = Beperkt Vennootschap (Limited)
BCF = Bioconcentration Factor
bp = Boiling point at stated pressure
bw = Body weight
ca = (Circa) about
CAS No = Chemical Abstracts Service Number (see ACS - American Chemical Society)
CEFIC = European Chemical Industry Council (established 1972)
CIPAC = Collaborative International Pesticides Analytical Council
CLP = REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Conc = Concentration
cP = CentiPoise
cSt = Centistokes
d = Day(s)
DIN = Deutsches Institut für Normung e.V.
DNEL = Derived No-Effect Level
DT50 = Time for 50% loss; half-life
EbC50 = Median effective concentration (biomass, e.g. of algae)
EC = European Community; European Commission
EC50 = Median effective concentration
EINECS = European Inventory of Existing Commercial Chemical Substances (EU, outdated, now replaced by EC Number)
ELINCS = European List of Notified (New) Chemicals (see Tab 7, Background - Guide)
ErC50 = Median effective concentration (growth rate, e.g. of algae)
EU = European Union
EWC = European Waste Catalogue
FAO = Food and Agriculture Organization (United Nations)
GIFAP = Groupement International des Associations Nationales de Fabricants de Produits Agrochimiques (now CropLife International)
h = Hour(s)
hPa = HectoPascal (unit of pressure)
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IC50 = Concentration that produces 50% inhibition
IMDG Code = International Maritime Dangerous Goods Code
IMO = International Maritime Organization
ISO = International Organization for Standardization

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IUCLID = International Uniform Chemical Information Database
IUPAC = International Union of Pure and Applied Chemistry
kg = Kilogram
Kow = Distribution coefficient between n-octanol and water
kPa = KiloPascal (unit of pressure)
LC50 = Concentration required to kill 50% of test organisms
LD50 = Dose required to kill 50% of test organisms
LEL = Lower Explosive Limit/Lower Explosion Limit
LOAEL = Lowest observed adverse effect level
mg = Milligram
min = Minute(s)
ml = Milliliter
mmHg = Pressure equivalent to 1 mm of mercury (133.3 Pa)
mp = Melting point
MRL = Maximum Residue Limit
MSDS = Material Safety Data Sheet
n.o.s. = Not Otherwise Specified
NIOSH = National Institute for Occupational Safety and Health (US)
NOAEL = No Observed Adverse Effect Level
NOEC = No observed effect concentration
NOEL = No Observable Effect Level
NOx = Oxides of Nitrogen
OECD = Organization for Economic Cooperation and Development
OEL = Occupational Exposure Limits
Pa = Pascal (unit of pressure)
PBT = Persistent, Bioaccumulative or Toxic
pH = -log₁₀ hydrogen ion concentration
pKa = -log₁₀ acid dissociation constant
PNEC = Previsible Non Effect Concentration
POPs = Persistent Organic Pollutants
ppb = Parts per billion
PPE = Personal Protection Equipment
ppm = Parts per million
ppt = Parts per trillion
PVC = Polyvinyl Chloride
QSAR = Quantitative Structure-Activity Relationship
REACH = Registration, Evaluation and Authorization of Chemicals (EU, see NCP)
SI = International System of Units
STEL = Short-Term Exposure Limit
tech. = Technical grade
TSCA = Toxic Substances Control Act (US)
TWA = Time-Weighted Average
vPvB = Very Persistent and Very Bioaccumulative
WHO = World Health Organization = OMS
y = Year(s)

16.3 Key literature references and sources for data

None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

No information available.

16.5 Relevant H- and EUH-phrases (Number and full text)

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

16.6 Training advice

None

16.7 Additional information

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None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.
