

SAFETY DATA SHEET



In accordance with 1907/2006 annex II and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Issued 2023-10-05
Version number 1.0

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

1.1. Product identifier

Trade name	TRIBORON FUEL FORMULA CONSUMER 2.0
UFI:	2P00-D0GK-000W-W15A

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

Identified uses	Fuel additives
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1.3. Details of the supplier of the safety data sheet

Company	Triboron International AB Gunnebogatan 34 SE-163 53 Spånga Sweden
Telephone	08-64 31 000
E-mail	info@triboron.com

1.4. Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Liq. 2, H225
Skin Irrit. 2, H315
Eye Irrit. 2, H319
Acute Tox. 4, H332
(See section 16)

2.2. Label elements

Hazard pictogram



Signal word	Danger
Hazard statements	
H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
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
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves and eye protection
P312	Call a POISON CENTER if you feel unwell
P403+P235	Store in a well-ventilated place. Keep cool
P501	Dispose of contents and container to authorised waste disposal facility

Supplemental hazard information

Contains: 2-BUTOXYETHANOL

2.3. Other hazards

This product does not contain any substances that are assessed to be a PBT or a vPvB

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

Contains substance on the candidate list of Substances of Very High Concern.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
ETHANOL		
CAS No: 64-17-5 EC No: 200-578-6 Index No: 603-002-00-5 REACH: 01-2119457610-43	Flam. Liq. 2, Eye Irrit. 2; H225, H319 <i>Eye Irrit. 2, H319: C ≥ 50 %</i>	60 - 80 %
2-BUTOXYETHANOL		
CAS No: 111-76-2 EC No: 203-905-0 Index No: 603-014-00-0	Acute Tox. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H331, H302, H315, H319 <i>ATE: 1200 mg/kg Orally</i> <i>ATE: 3 mg/l Inhalation (vapours)</i>	≥20 - <30 %
DENATONIUM BENZOATE		
CAS No: 3734-33-6 EC No: 223-095-2 REACH: 01-2120102843-65	Acute Tox. 4, Acute Tox. 4, Eye Dam. 1, Aquatic Chronic 3; H332, H302, H318, H412	<1 %
BORIC ACID		
CAS No: 10043-35-3 EC No: 233-139-2 Index No: 005-007-00-2	Repr. 1B; H360FD	<0.3 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms occur, call a doctor/physician.

Upon breathing in

Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact

Remove contact lenses immediately if possible.

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor/ophthalmologist.

Upon skin contact

Wash the skin with soap and water.

Remove contaminated clothing.

If symptoms occur, contact a physician.

Upon ingestion

Rinse mouth out thoroughly first with water, then SPIT OUT the rinse water. Drink at least half a litre of water and seek medical advice. DO NOT INDUCE VOMITING.

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

Upon breathing in

Harmful if inhaled.

Upon eye contact

Causes serious eye irritation.

Upon skin contact

Irritation.

Upon ingestion

May cause irritation of mucous membranes, nausea and vomiting.

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

Symptomatic treatment.

Upon contact with a doctor, make sure to have the label or this safety data sheet with you.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

Unsuitable extinguishing agents

May not be extinguished with water dispersed under high pressure.

5.2. Special hazards arising from the substance or mixture

Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning, and, in case of incomplete combustion, aldehydes and other toxic, harmful, irritant or environmentally harmful substances.

Emits flammable vapours which may form an explosive mixture with air.

5.3. Advice for firefighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use proper breathing apparatus.

Wear full protective clothing.

Cool closed containers that were exposed to fire with water.

Vapors are heavier than air and may spread along floors.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Keep unauthorized and unprotected people at a safe distance.
- Evacuate the accident area and call an ambulance, if relevant.
- Do not inhale the product and avoid exposure to skin, eyes and clothing.
- Note the risk of ignition.
- Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.
- Switch off power at the main switch. Do not use the power switch in the room where the spillage has occurred.
- Note, risk for formation of sparks due to static electricity. Do not remove clothing in a room where spillage has occurred.
- Ensure good ventilation.
- Use recommended safety equipment, see section 8.
- Use breathing apparatus when oxygen levels are low or unknown.

6.2. Environmental precautions

- Avoid release to drains, soil or watercourses.
- Prevent from entering sewers, basements and pits, or any place where gas accumulation could be dangerous.
- Notify rescue services for larger spillage.

6.3. Methods and material for containment and cleaning up

- Do NOT use tools emitting sparks when cleaning.
- Absorb the liquid with an inert absorbent, vermiculite, for example. Collect the material for disposal at a waste disposal facility.
- Ensure good ventilation after sanitation.

6.4. Reference to other sections

- See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Take the necessary preventive and protective measures for safe handling.
- Do not inhale the fumes and avoid exposure to skin, eyes and clothing.
- Work in order to avoid spillage. If spillage does occur, address it immediately in accordance with the directions specified in Section 6 of this safety data sheet.
- Vapors are heavier than air and may spread along floors.
- Open fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.
- The product may be electrostatically charged. Always ground the containers while transferring the contents from one container to another. Do not use tools that may cause sparks.
- Store this product separately from food items and keep it out of the reach of children and pets.
- Do not eat, drink or smoke in premises where this product is handled.
- Wash your hands after using the product.
- Remove contaminated clothing.
- Wash contaminated clothing before reuse.
- Keep away from incompatible products.
- Use recommended safety equipment, see section 8.
- Implement appropriate engineering controls if necessary, see Section 8.

7.2. Conditions for safe storage, including any incompatibilities

- The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.
- Take the necessary preventive and protective measures for safe storage.
- Keep out of reach for children.
- Store separately from food and animal fodder, incl. utensils or surfaces which have been in contact with these things.
- Always use sealed and visibly labeled packages.
- Store tightly, in original packaging.
- Store as flammable liquid.
- Store in dry and cool area.
- Keep away from heat and sunlight.
- Store in a well-ventilated space.
- Do not store close to incompatible materials (see section 10.5).

7.3. Specific end use(s)

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

ETHANOL

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 1000 ppm / 1920 mg/m³

2-BUTOXYETHANOL

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 25 ppm / 123 mg/m³

Short term exposure limit (STEL) 50 ppm / 246 mg/m³

Note Sk,BMGV

Explanations of abbreviations are given in Section 16b

DNEL

ETHANOL

	Type of exposure	Route of exposure	Value
Worker	Acute Local	Inhalation	1900 mg/m ³
Consumer	Chronic Systemic	Inhalation	114 mg/m ³
Worker	Chronic Systemic	Dermal	343 mg/kg
Worker	Chronic Systemic	Inhalation	950 mg/m ³
Consumer	Acute Local	Inhalation	950 mg/m ³
Consumer	Acute Local	Dermal	950 mg/m ³
Consumer	Chronic Systemic	Oral	87 mg/kg
Consumer	Chronic Systemic	Dermal	206 mg/kg

BORIC ACID

	Type of exposure	Route of exposure	Value
Consumer	Chronic Systemic	Inhalation	4.15 mg/m ³
Worker	Chronic Systemic	Dermal	3924.8 g/d
Worker	Chronic Systemic	Inhalation	8.3 mg/m ³
Consumer	Acute Systemic	Oral	0.98 mg/kg bw/d
Consumer	Chronic Systemic	Oral	0.98 mg/kg bw/d
Consumer	Chronic Systemic	Dermal	196 mg/kg bw/d

PNEC

ETHANOL

Environmental protection target	PNEC value
Fresh water	0.96 mg/l
Freshwater sediments	3.6 mg/kg
Marine water	0.79 mg/l
Marine sediments	2.9 mg/kg
Food chain	380 mg/kg dw
Microorganisms in sewage treatment	580 mg/l
Soil (agricultural)	0.63 mg/kg
Intermittent	2.75 mg/L

BORIC ACID

Environmental protection target	PNEC value
Fresh water	1.35 mg/l
Freshwater sediments	1.8 mg/kg
Marine water	1.35 mg/l
Marine sediments	1.8 mg/kg
Microorganisms in sewage treatment	1.75 mg/l
Soil (agricultural)	5.7 mg/kg dw
Intermittent	13.7 mg/L

8.2. Exposure controls

The risks posed by the product or its constituents must be considered in the task specific risk assessment, in accordance with current working environment legislation. The risk assessment should be reviewed regularly and updated if necessary.

8.2.1. Appropriate engineering controls

The ventilation in the workplace must ensure an air quality that meets the requirements of the current working environment legislation. Local exhaust ventilation should be used to remove airborne contaminants at the source. Emergency showers and eye-rinsing facilities must be available at the workplace.

Eye/face protection

Use protective glasses with tight seals according to standard EN166.

Skin protection

Use suitable protective clothing.

Use protective gloves fulfilling the standard EN374 if there is a risk of direct contact.

During continuous contact use gloves with a minimum breakthrough time of at least 240 minutes, preferably over 480 minutes.

The most suitable protective glove should be chosen in consultation with the glove supplier, taking into account the risk assessment for the specific task and the properties of the chemicals involved. Note that the breakthrough time of the material is affected by the duration of the exposure, temperature conditions, abrasion, etcetera.

Based on the chemical properties of the product, the following glove materials are recommended (EN 374):.

– Butyl rubber.

Respiratory protection

Use appropriate respiratory protective equipment in case of insufficient ventilation.

The most appropriate respiratory protective equipment should be decided in consultation with the appointed safety representative, taking into account the risk assessment for the specific task.

Based on the physical and chemical properties of the product, the following filter type(s) and/or filter combination(s) are recommended:.

– A/P2.

8.2.3. Environmental exposure controls

For limiting environmental exposure, see section 12.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	liquid
(b) Colour	Form: liquid
(c) Odour	varying
(d) Melting point/freezing point	like alcohol
(e) Boiling point or initial boiling point and boiling range	Not indicated
(f) Flammability	ETHANOL: 78 - 80 °C
(g) Lower and upper explosion limit	Not indicated
(h) Flash point	Not indicated
(i) Auto-ignition temperature	ETHANOL: 12 °C
(j) Decomposition temperature	Not indicated
(k) pH	Not indicated
(l) Kinematic viscosity	Not indicated
(m) Solubility	Solubility in water: Soluble
(n) Partition coefficient n-octanol/water (log value)	Not indicated
(o) Vapour pressure	Not indicated
(p) Density and/or relative density	Not indicated
(q) Relative vapour density	Not indicated
(r) Particle characteristics	Not indicated

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not indicated

9.2.2. Other safety characteristics

Not indicated

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapour can create explosive mixtures with air.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.
Protect from heat and direct sunlight.

10.5. Incompatible materials

Avoid contact with:
Strong acids.
Strong bases.
Strong oxidizers.
Peroxides.

10.6. Hazardous decomposition products

Not indicated.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute toxicity

Harmful when inhaled.

ETHANOL

LD50 rabbit 24h: > 20000 mg/kg Dermally

LC50 rat 4h: 124.7 mg/l Inhalation

LD50 rat 10h: 38 mg/liter Inhalation

LD50 rat 10h: 2000 ppm Inhalation

LD50 rat 24h: 7060 mg/kg Orally

2-BUTOXYETHANOL

ATE : 1200 mg/kg Orally

ATE : 3 mg/l Inhalation (vapours)

BORIC ACID

LD50 rabbit 24h: > 2000 mg/kg Dermally

LC50 rat 4h: > 2 mg/l Inhalation

LD50 rat 24h: 2660 mg/kg Orally

Skin corrosion/irritation

Irritant to skin.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant.

STOT-single exposure

The product is not classified for specific organ toxicity after single exposure.

STOT-repeated exposure

The product is not classified for specific organ toxicity after repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

11.2.2. Other information

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

The product is not to be labelled as a environmental hazard. However, it is not inconceivable that large emissions, or repeated small emissions, can have a harmful effect on the environment.

Prevent release on land, in water and drains.

ETHANOL

LC50 Rainbow trout (*Oncorhynchus mykiss*) 96h: 1 - 16 g/l

LC50 fathead minnow (*Pimephales promelas*) 96h: > 100 mg/l

LC50 Freshwater water flea (*Daphnia magna*) 48h: 12340 mg/l

EC50 Algae 72 h: 275 mg/l

EC50 Freshwater water flea (*Daphnia magna*) 48h: 1 - 14221 mg/l

BORIC ACID

LC50 fathead minnow (*Pimephales promelas*) 96h: 456 mg/l

LC50 Freshwater water flea (*Daphnia magna*) 48h: 760 mg/l

EC50 Freshwater water flea (*Daphnia magna*) 48 h: 102 mg/l

EC50 Algae 72 h: > 66 mg/l

LC50 Fish 96h: > 80 mg/l

EC50 Algae (*Pseudokirchneriella subcapitata*) 72h: 229 mg/l

12.2. Persistence and degradability

The product degrades in the natural environment.

12.3. Bioaccumulative potential

Neither this product, nor its contents, accumulates in nature.

12.4. Mobility in soil

The product is soluble in water and is therefore mobile in soil and water.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Endocrine disrupting properties

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

12.7. Other adverse effects

Data lacking.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

Avoid discharge into sewers.

Discarded products must be disposed of as hazardous waste in accordance with regulations.

Not completely emptied packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely emptied packaging can be recycled.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number or ID number

1170

14.2. UN proper shipping name

ETHYL ALCOHOL SOLUTION

14.3. Transport hazard class(es)

Class

3: Flammable liquids

Classification code (ADR/RID)

F1: Flammable liquids having a flash-point of or below 60 °C

Subsidiary risk (IMDG)

No subsidiary risk according to IMDG

Labels



14.4. Packing group

Packing group II

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: D/E

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Other transport information

Transport category: 2; Highest total quantity per transported unit 333 kg or liters

Stowage category A (IMDG)

Emergency Schedule (EmS) for FIRE (IMDG) F-E

Emergency Schedule (EmS) for SPILLAGE (IMDG) S-D

SECTION 15: Regulatory information

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

Contains substance on the candidate list of Substances of Very High Concern.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the first version

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

Flam. Liq. 2	Flammable liquids, Hazard Category 2 - Flam. Liq. 2, H225 - Highly flammable liquid and vapour
Eye Irrit. 2	Serious eye damage/eye irritation, Hazard Category 2 - Eye Irrit. 2, H319 - Causes serious eye irritation
Acute Tox. 3	Acute toxicity (inhal.), Hazard Category 3 - Acute Tox. 3, H331 - Toxic if inhaled
Acute Tox. 4	Acute toxicity (inhal.), Hazard Category 4 - Acute Tox. 4, H332 - Harmful if inhaled
Skin Irrit. 2	Skin corrosion/irritation, Hazard Category 2 - Skin Irrit. 2, H315 - Causes skin irritation
Eye Dam. 1	Serious eye damage/eye irritation, Hazard Category 1 - Eye Dam. 1, H318 - Causes serious eye damage
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3 - Aquatic Chronic 3, H412 - Harmful to aquatic life with long lasting effects
Repr. 1B	Reproductive toxicity, Hazard Category 1B - Repr. 1B, H360FD - May damage fertility. May damage the unborn child

Explanations of the abbreviations in Section 8

United Kingdom

Sk Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity

BMGV Biological monitoring guidance values

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG International Maritime Dangerous Goods Code

ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA The International Air Transport Association

Tunnel restriction code: D/E; Transport by bulk or via tank: Passage forbidden through tunnels of category D and E, Other transportation means: Passage forbidden through tunnels of category E

Transport category: 2; Highest total quantity per transported unit 333 kg or liters

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2023-10-05.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

- 1907/2006 REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
- 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- 2008/98/EC DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I, where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

Full texts for hazard statements mentioned in section 3

- H225 Highly flammable liquid and vapour
- H319 Causes serious eye irritation
- H331 Toxic if inhaled
- H302 Harmful if swallowed
- H315 Causes skin irritation
- H332 Harmful if inhaled
- H318 Causes serious eye damage
- H412 Harmful to aquatic life with long lasting effects
- H360FD May damage fertility. May damage the unborn child

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

Not indicated.

Other relevant information

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se