

SAFETY DATA SHEET

Ethanol fuel E85



The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	15.01.2020
Revision date	28.10.2022

1.1. Product identifier

Product name	Ethanol fuel E85
UFI	FMY7-6SQC-ND09-9XDH
Synonyms	RE85
Article no.	130017

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

Use of the substance / mixture	Motor fuel Not to be used as cleaning agent or solvent
Main intended use	PC-FUE-OTH Other fuels
Industrial use	Yes
Professional use	Yes
Consumer use	Yes

1.3. Details of the supplier of the safety data sheet

Company name	North European Oil Trade
Office address	Urho Kekkosen katu 5C, 00100 Helsinki
Postal address	P.O. Box 55
Postcode	00088 S-RYHMÄ
City	Helsinki
Country	Finland
Telephone number	+358 10 768 0862
Email	tuotelaatu@neot.fi
Website	www.neot.fi/en

Enterprise No. FI18010565

1.4. Emergency telephone number

Emergency telephone Telephone number: +358 800 147 111 or +358 9 471 977
Open 24 hours a day.
Description: Poison Information Centre (in Finland), P.O. Box 790 (Tukholmankatu 17), 00029 HUS

Telephone number: 112
Open 24 hours a day.
Description: General emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flam. Liq. 1; H224
Skin Irrit. 2; H315
Eye Irrit. 2; H319
STOT SE 3; H336
Asp. Tox. 1; H304
Carc. 1B; H350
Muta. 1B; H340
Repr. 2; H361d
Aquatic Chronic 2; H411

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label Ethanol 70 - 85 %, Gasoline 15 - 30 %

Signal word Danger

Hazard statements

H224 Extremely flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
H350 May cause cancer .
H340 May cause genetic defects
H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements 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.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor / if nausea occurs.
 P331 Do NOT induce vomiting.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P273 Avoid release to the environment.

2.3. Other hazards

PBT / vPvB	For results of PBT and vPvB assessment, see point 12.5.
Hazard description, general	Highly volatile. Vapours are heavier than air and may form explosive mixtures with air. Vapours in the tank may ignite if the temperature rises above flash point and the air/gas mixture concentration is within the explosion limits. Electrostatic sparks are possible in connection with pumping. Electrostatic sparks may cause fire.
Environmental effects	Risk of soil and groundwater contamination.
Other hazards	Endocrine disrupting properties: Contains a substance under review for endocrine disrupting properties.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 REACH Reg. No.: 01-2119457610-43-XXXX	Flam. Liq. 2; H225 Eye Irrit. 2; H319; SCL C ≥ 50 %	70 - 85 %	
Gasoline	CAS No.: 86290-81-5 EC No.: 289-220-8 REACH Reg. No.: 01-2119471335-39	Flam. Liq. 1; H224 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 Muta. 1B; H340 Carc. 1B; H350 Repr. 2; H361fd Aquatic Chronic 2; H411	15 - 30 %	
MTBE	CAS No.: 1634-04-4 EC No.: 216-653-1 REACH Reg. No.: 01-2119452786-27	Flam. Liq. 2; H225 Skin Irrit. 2; H315	< 7 %	
ETBE	CAS No.: 637-92-3 EC No.: 211-309-7 REACH Reg. No.: 01-2119452785-29	Flam. Liq. 2; H225 STOT SE 3; H336	< 7 %	
2-Methoxy-2-methylbutane	CAS No.: 994-05-8 EC No.: 213-611-4 REACH Reg. No.: 01-2119453236-41	Flam. Liq. 2; H225 Acute Tox. 4; H302 STOT SE 3; H336	< 7 %	
TAAE	CAS No.: 919-94-8 REACH Reg. No.:	Flam. Liq. 2; H225 Skin Irrit. 2; H315	≤ 3 %	

	01-2119489926-16-XXXX	Eye Irrit. 2; H319 STOT SE 3; H336	
Butane	CAS No.: 106-97-8 EC No.: 203-448-7	Flam. Gas 1; H220 Press. Gas	≤ 5 %
Isobutanol	CAS No.: 78-83-1 EC No.: 201-148-0	Flam. Liq. 3; H226 STOT SE 3; H335 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336	~ 0,4 %
Description of the mixture	Mixture of petroleum products, ethanol, butane, isobutanol and additives. MTBE, ETBE and TAME concentration ≤ 4.5 vol%, total ethers ≤ 4.5 vol%. The gasoline component (CAS 86290-81-5) contains: benzene (CAS 71-43-2) ≤ 1 vol-%, toluene (CAS 108-88-3) 5 - 15 vol-%, and n-hexane (CAS 110-54-3) < 5 vol-%.		
Remarks, substance	MTBE (CAS: 1634-04-4) was admitted in the community roll-out plan (CoRAP substance list) due to its suspected endocrine disrupting effects.		

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	If inhaled, remove the victim to fresh air. If rapid recovery does not follow and if significant exposure, seek medical advice.
Skin contact	Remove contaminated clothing. Rinse splashes immediately with plenty of water for several minutes, followed by washing of the affected areas with soap and water. If redness, swelling, pain and/or other skin reactions occur, consult a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids. Continue irrigation for at least 15 minutes. If irritation, blurred vision or other symptoms persist, consult a physician (risk of corneal injury).
Ingestion	DO NOT INDUCE VOMITING: obtain medical assistance immediately. If spontaneous vomiting occurs, help to keep the victim's head down so that aspiration into the lungs will not occur (danger of chemical pneumonitis). If delayed symptoms such as fever (> 37 °C), shortness of breath, chest pain, wheezing or continuous coughing occur during six hours after exposure, obtain immediate medical attention. Do not give the patient anything to eat.

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

General symptoms and effects	Harmful if inhaled. Product may irritate respiratory organs and cause fatal chemical pneumonia. If the product has found its way to the lungs, the following signs and symptoms may appear: fever, shortness of breath, chest pain, difficulty in breathing, wheezing, asphyxia, dyspnoea, coughing etc. Respiratory symptoms may occur immediately or several hours after exposure.
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4.3. Indication of any immediate medical attention and special treatment needed

Medical treatment	Symptomatic treatment.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Foam or powder. Sand or earth are suitable in small fires. Heavy foam and water mist only for professional firefighters.
Improper extinguishing media	Powerful water jet.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Flammable liquid and vapour. Explosion risk due to pressure increase if product containers or tanks are subjected to fire. The product floats and can be reignited to burn on water surface.
Hazardous combustion products	Hazardous combustion gases may contain: a complex mixture of airborne solid and liquid particles and gases (smoke), carbon monoxide, sulphur oxides, various organic and inorganic compounds. Carbon dioxide may be formed by incomplete burning.

5.3. Advice for firefighters

Fire fighting procedures	Cool product containers and tanks near the fire with water spray from a sufficiently safe distance. Prevent entry of extinguishing media into waterways.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Avoid skin contact and oil mist aspiration.
Protective equipment	Use appropriate personal protection equipment.
For emergency responders	Evacuate people upwind from the spill area. Ensure adequate ventilation, especially indoors. Vapours are heavier than air and spread along the surface of the ground. Keep unauthorised personnel from entering the danger zone. Remove all ignition sources. Take precautionary measures to avoid electrostatic discharges. Ensure grounding of electrical equipment.

6.2. Environmental precautions

Environmental precautionary measures	Stop the leak if it can be done safely. Aim to prevent spreading of the product and extinguishing media into the environment. Liquid product must be contained before it contaminates sewers, soil and waterways. Immediately notify the local authorities about any damage.
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6.3. Methods and material for containment and cleaning up

Containment	If possible, extensive leaks into water bodies should be limited by floating booms or other mechanical means.
Clean up	Immediately start clean-up of the liquid product and contaminated soil. Collect the liquid leak by pumping or adsorb small volumes with inert materials (e.g. sand, diatomaceous earth, commercial absorbent). Collect inert materials in suitable labeled containers and close them tightly for disposal.
Other information	Pay attention to the fire and health hazards caused by the product. Use of dispersants should be co-ordinated with an expert; where appropriate, local authorities must approve their use.

6.4. Reference to other sections

Other instructions	Safe handling: see Section 7. Personal protective equipment: see Section 8. Disposal: see Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Avoid prolonged or repeated contact with skin.
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Protective safety measures

Protective safety measures	Handle and store away from all sources of heat or ignition. Take precautionary measures (grounding) against static discharges. Concentrations in air must be kept below any lower explosive limits. Only use in closed systems or ensure adequate ventilation (use process enclosures or local exhaust ventilation if necessary). During tank operations follow special instructions (risk of oxygen displacement, ethers and hydrocarbons).
Advice on general occupational hygiene	Avoid inhalation of vapours and contact with skin, eyes or clothing. Wash hands after handling. Eating, drinking, and smoking are prohibited while handling the product. If required, use personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in containers and areas suitable for the storage of combustible liquids. Small product batches are stored in tightly sealed containers impermeable to hydrocarbons. Recommended container materials or coatings: mild steel, stainless steel. Use appropriate protective structures, such as collecting pools, loading/unloading station surfacing and sewerage systems to prevent leakage into the environment.
Conditions to avoid	Do not store in unmarked containers or vessels. Store away from all sources of heat or ignition and food and drink.

7.3. Specific end use(s)

Specific use(s)	None reported.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Ethanol	CAS No.: 64-17-5	Limit value (8 h) : 1000 ppm Limit value (8 h) : 1900 mg/m ³ Limit value (short term) Value: 1300 ppm Limit value (short term) Value: 2500 mg/m ³	
Gasoline	CAS No.: 86290-81-5	Limit value (8 h) : 100 mg/	

		<p>m³</p> <p>Comments: Petroleum ethers, group 3</p> <p>Limit value (8 h) : 1 ppm</p> <p>Limit value (8 h) : 3,25 mg/m³</p> <p>Limit value (short term)</p> <p>Value: 48 mg/m³</p> <p>Comments: Benzene. Skin (can absorb through skin) .</p> <p>Limit value (8 h) : 25 ppm</p> <p>Limit value (8 h) : 81 mg/m³</p> <p>Limit value (short term)</p> <p>Value: 100 ppm</p> <p>Limit value (short term)</p> <p>Value: 380 mg/m³</p> <p>Comments: Toluene. Skin (can absorb through skin) .</p> <p>Limit value (8 h) : 20 ppm</p> <p>Limit value (8 h) : 72 mg/m³</p> <p>Comments: N-hexane. Skin (can absorb through skin) .</p>	
MTBE	CAS No.: 1634-04-4	<p>Limit value (8 h) : 50 ppm</p> <p>Limit value (8 h) : 180 mg/m³</p> <p>Limit value (short term)</p> <p>Value: 100 ppm</p> <p>Limit value (short term)</p> <p>Value: 360 mg/m³</p>	TWA Year: 2016
ETBE	CAS No.: 637-92-3	<p>Limit value (8 h) : 5 ppm</p> <p>Limit value (8 h) : 25 mg/m³</p>	
2-Methoxy-2-methylbutane	CAS No.: 994-05-8	<p>Limit value (8 h) : 20 ppm</p> <p>Limit value (8 h) : 84 mg/m³</p>	
Butane	CAS No.: 106-97-8	<p>Limit value (8 h) : 800 ppm</p> <p>Limit value (8 h) : 1900 mg/m³</p> <p>Limit value (short term)</p> <p>Value: 1000 ppm</p> <p>Limit value (short term)</p> <p>Value: 2400 mg/m³</p>	
Isobutanol	CAS No.: 78-83-1	<p>Country of origin: USA (NIOSH)</p> <p>Limit value (8 h) : 50 ppm</p> <p>Limit value (8 h) : 150 mg/m³</p>	
Control parameters comments	<p>Biological toluene limit: blood toluene concentration 500 nmol/l (BIOL 2011/FIN).</p> <p>Individual limit values can be applied for hydrocarbons.</p> <p>Occupational exposure monitoring method: SFS-EN 689, SFS-3861.</p>		

DNEL / PNEC

DNEL Reference: No product chemical safety assessment carried out.

PNEC	Reference: Unknown.
Substance	Gasoline
DNEL	<p>Group: Professional Route of exposure: Acute inhalation (systemic) Value: 1300 mg/m³ Reference: 15 minutes.</p> <p>Group: Professional Route of exposure: Acute inhalation (local) Value: 1100 mg/m³ Reference: 15 minutes.</p> <p>Group: Professional Route of exposure: Long-term inhalation (local) Value: 840 mg/m³ Reference: 8 h.</p> <p>Group: Consumer Route of exposure: Acute inhalation (systemic) Value: 1200 mg/m³ Reference: 15 minutes.</p> <p>Group: Consumer Route of exposure: Acute inhalation (local) Value: 640 mg/m³ Reference: 15 minutes.</p> <p>Group: Consumer Route of exposure: Long-term inhalation (local) Value: 180 mg/m³ Reference: 24 h.</p>

8.2. Exposure controls

Precautionary measures to prevent exposure

Technical measures to prevent exposure	Handle the product in closed systems. Ensure adequate ventilation. Use process enclosures or local exhaust ventilation and personal protection if necessary.
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Eye / face protection

Required Properties	Use tight-fitting safety goggles if splashing may occur or aerosol is formed. Use a face shield, if required.
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Hand protection

Suitable gloves type	Wear appropriate chemical resistant safety gloves (EN 374).
Suitable materials	Nitrile. Neoprene. PVA.
Unsuitable materials	Note: PVA gloves do not withstand water and are not suitable for use in case of emergency.
Breakthrough time	Value: > 480 minute(s) Comments: protection index 6 (EN374)

Hand protection, comments Change protective gloves regularly in order to avoid penetration problems.

Skin protection

Suitable protective clothing Wear appropriate antistatic protective clothing. If splashing may occur, use chemical-resistant gloves, footwear and apron.

Respiratory protection

Recommended type of equipment Wear a respirator or half mask. Respiratory protection: combined organic gas and vapour and particle (solid and liquid) filter (type A2-P3).

Respiratory protection, comments If use of filtering means is incompatible with the conditions (e.g., high concentrations, oxygen-poor conditions, confined space), use compressed-air or fresh-air breathing apparatus. The filter must be changed frequently enough.

Appropriate environmental exposure control

Environmental exposure controls Prevent product entry into sewers or the environment. Precautions must be taken against leakages by constructing collecting pools and sewerage systems as well as by surfacing the loading and unloading stations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Low-viscosity liquid.
Colour	Clear May be colored red
Odour	Typical
Odour limit	Comments: Unknown
pH	Value: 6,5 - 9,0
Melting point / melting range	Comments: Not applicable
Boiling point / boiling range	Value: 25 - 205 °C
Flash point	Value: 0 °C Comments: Estimate
Evaporation rate	Comments: Unknown Highly volatile
Flammability	Unknown
Lower explosion limit with unit of measurement	Value: 1 vol% Comments: Calculated
Upper explosion limit with units of measurement	Value: 19 vol% Comments: Calculated
Vapour pressure	Value: < 70 kPa
Vapour density	Value: > 1,6 Comments: Air = 1 Temperature: 20 °C

Particle characteristics	Comments: Not relevant.
Relative density	Value: 0,75 Comments: Water = 1 Temperature: 20 °C
Solubility	Comments: Ethanol fully soluble in water. Other components partly soluble in water.
Partition coefficient: n-octanol/ water	Comments: Gasoline hydrocarbons log Kow > 3 Comments: MTBE log Kow = 1,06 Comments: ETBE log Kow = 1,48 Comments: TAME log Kow = 1,55 Comments: TAEE log Kow = 2,95 – 3,35 Comments: Ethanol log Kow = 0,35
Auto-ignition temperature	Value: > 280 °C Comments: Estimation
Decomposition temperature	Comments: Unknown
Viscosity	Value: < 2 mm ² /s Comments: Water = 0,6 mm ² /s Temperature: 40 °C
Explosive properties	Not classified as explosive
Oxidising properties	Not classified as oxidising

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No hazardous reactions known under normal use and storage conditions.

10.2. Chemical stability

Stability Chemically stable under normal storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Explosive gas/air mixtures may form even at room temperature.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat sources, fire, sparks and other ignition sources.

10.5. Incompatible materials

Materials to avoid Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Not known.

SECTION 11: Toxicological information

11.1. Oplysninger om fareklasser som defineret i forordning (EF) nr. 1272/2008

Substance	Ethanol
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Oral Value: > 2000 mg/kg Animal test species: Rat</p> <p>Effect tested: LC50 Route of exposure: Inhalation. Value: > 5000 mg/m³ Animal test species: Rat</p>

Substance	Gasoline
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Oral Value: > 5000 mg/kg Animal test species: Rat Test reference: OECD 401</p> <p>Effect tested: LC50 Route of exposure: Inhalation. Value: > 5610 mg/m³ Animal test species: Rat Test reference: OECD 403</p> <p>Effect tested: LD50 Route of exposure: Dermal Value: > 2000 mg/kg Animal test species: Rabbit Test reference: OECD 402</p>

Substance	MTBE
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Oral Value: > 2000 mg/kg Animal test species: Rat</p> <p>Effect tested: LC50 Route of exposure: Inhalation. Duration: 4 hour(s) Value: > 5000 mg/m³ Animal test species: Rat</p>

Substance	ETBE
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Dermal Value: > 2000 mg/kg Animal test species: Rabbit</p>
Substance	2-Methoxy-2-methylbutane
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Oral Value: > 2000 mg/kg</p> <p>Effect tested: LD50 Route of exposure: Oral Value: 1602 - 2417 mg/kg Animal test species: Rat Test reference: OECD 401</p> <p>Effect tested: LC50 Route of exposure: Inhalation. Duration: 4 hour(s) Value: > 5400 mg/m³ Animal test species: Rat Test reference: OECD 403</p> <p>Effect tested: LD50 Route of exposure: Dermal Value: > 2000 mg/kg Animal test species: Rabbit Test reference: OECD 402</p>
Substance	TAAE
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Oral Value: > 2000 mg/kg</p>
Substance	Butane
Acute toxicity	<p>Effect tested: LC50 Route of exposure: Inhalation. Duration: 4 hour(s) Value: > 20 % vol/vol Animal test species: Rat</p>
Substance	Isobutanol
Acute toxicity	<p>Effect tested: LD50 Route of exposure: Oral Value: 2460 mg/kg Animal test species: Rat</p> <p>Effect tested: LD50 Route of exposure: Dermal Value: 3400 mg/m³ Animal test species: Rabbit</p> <p>Effect tested: LC50</p>

Other toxicological data

Route of exposure: Inhalation.
Duration: 4 hour(s)
Value: > 10,3 - 11,9 mg/l
Animal test species: Rat

The product has not been classified as acutely toxic. The product contains harmful and toxic ingredients.

Other information regarding health hazards

Inhalation	Vapours and mist may irritate the respiratory tract.
Skin contact	Irritates the skin. Prolonged or repeated contact may cause skin irritation and drying.
Eye contact	Causes serious eye irritation.
Sensitisation	The product is not classified as sensitizing.
Germ cell mutagenicity	Comments: The product may cause genetic defects.
Carcinogenicity, other information	The product is suspected of causing cancer.
Reproductive toxicity	Suspected of damaging fertility. Suspected of damaging the unborn child
Assessment of specific target organ toxicity - single exposure, classification	The product is classified as toxic to specific target organs in case of single exposure. Exposure to high concentrations by inhalation may cause headache, dizziness and nausea; prolonged exposure may result in unconsciousness and/or death.
Assessment of specific target organ toxicity - repeated exposure, classification	The product is not classified as toxic to specific target organs at repeated exposure. No known effects.
Aspiration hazard, comments	The product may be fatal if swallowed and enters airways.

Symptoms of exposure

In case of ingestion Ingestion may cause irritation of the gastrointestinal tract.

11.2 Other information

Endocrine disruption MTBE (CAS: 1634-04-4) was admitted in the community roll-out plan (CoRAP substance list) due to its suspected endocrine disrupting effects.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Ethanol
Aquatic toxicity, fish	Value: 14,2 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s)
Substance	Gasoline
Aquatic toxicity, fish	Value: 8,2 mg/l Effect dose concentration: LL50 Exposure time: 96 hour(s)

	Comments: Gasoline hydrocarbons.
Substance	MTBE
Aquatic toxicity, fish	<p>Value: 574 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s)</p> <p>Value: 299 mg/l Effect dose concentration: NOEC Exposure time: 31 day(s)</p>
Substance	ETBE
Aquatic toxicity, fish	<p>Value: 574 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s)</p> <p>Value: 299 mg/l Effect dose concentration: NOEC Exposure time: 31 day(s)</p>
Substance	2-Methoxy-2-methylbutane
Aquatic toxicity, fish	<p>Value: 574 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s)</p> <p>Value: 279 mg/l Exposure time: 31 day(s) Comments: Effect dose concentration: IC20</p> <p>Value: 308 mg/l Exposure time: 31 day(s) Comments: Effect dose concentration: IC25</p>
Substance	TAAE
Aquatic toxicity, fish	<p>Value: 240 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s)</p> <p>Value: 279 mg/l Exposure time: 31 day(s) Comments: Effect dose concentration: IC20</p> <p>Value: 308 mg/l Exposure time: 31 day(s) Comments: Effect dose concentration: IC25</p>
Substance	Ethanol
Aquatic toxicity, algae	<p>Value: 275 mg/l Effect dose concentration: EC50 Exposure time: 3 day(s)</p> <p>Value: 11,5 mg/l Effect dose concentration: EC10 Exposure time: 3 day(s)</p>
Substance	Gasoline

Aquatic toxicity, algae	<p>Value: 3,7 mg/l Effect dose concentration: EL50 Exposure time: 96 hour(s) Comments: Gasoline hydrocarbons.</p> <p>Value: 0,5 mg/l Exposure time: 72 hour(s) Comments: Effect dose concentration: NOELR Gasoline hydrocarbons.</p>
Substance	MTBE
Aquatic toxicity, algae	<p>Value: 491 mg/l Effect dose concentration: LC50 Exposure time: 96 hour(s)</p> <p>Value: 105 mg/l Exposure time: 96 hour(s) Comments: Effect dose concentration: IC20</p>
Substance	ETBE
Aquatic toxicity, algae	<p>Value: 1100 mg/l Effect dose concentration: EC50 Exposure time: 72 hour(s)</p> <p>Value: 7,5 mg/l Effect dose concentration: NOEC Exposure time: 72 hour(s)</p>
Substance	2-Methoxy-2-methylbutane
Aquatic toxicity, algae	<p>Value: 230 mg/l Effect dose concentration: EC50 Exposure time: 72 hour(s)</p> <p>Value: 77 mg/l Effect dose concentration: NOEC Exposure time: 72 hour(s)</p>
Substance	Ethanol
Aquatic toxicity, crustacean	<p>Value: 5012 mg/l Effect dose concentration: LC50 Exposure time: 48 hour(s)</p> <p>Value: 2 mg/l Effect dose concentration: NOEC Exposure time: 10 day(s)</p>
Substance	Gasoline
Aquatic toxicity, crustacean	<p>Value: 4,5 mg/l Effect dose concentration: EL50 Exposure time: 48 hour(s) Comments: Gasoline hydrocarbons.</p> <p>Value: 10 mg/l Effect dose concentration: EL50 Exposure time: 21 day(s)</p>

	<p>Comments: Gasoline hydrocarbons.</p> <p>Value: 0,5 mg/l</p> <p>Exposure time: 48 hour(s)</p> <p>Comments: Effect dose concentration: NOELR Gasoline hydrocarbons.</p>
Substance	MTBE
Aquatic toxicity, crustacean	<p>Value: 44 mg/l</p> <p>Effect dose concentration: LC50</p> <p>Exposure time: 96 hour(s)</p> <p>Value: 26 mg/l</p> <p>Effect dose concentration: NOEC</p> <p>Exposure time: 28 day(s)</p> <p>Value: 50 mg/l</p> <p>Effect dose concentration: LOEC</p> <p>Exposure time: 28 day(s)</p>
Substance	ETBE
Aquatic toxicity, crustacean	<p>Value: 37 mg/l</p> <p>Effect dose concentration: EC50</p> <p>Exposure time: 96 hour(s)</p> <p>Value: 3,4 mg/l</p> <p>Effect dose concentration: NOEC</p> <p>Exposure time: 28 day(s)</p>
Substance	2-Methoxy-2-methylbutane
Aquatic toxicity, crustacean	<p>Value: 14 mg/l</p> <p>Effect dose concentration: LC50</p> <p>Exposure time: 96 hour(s)</p> <p>Value: 3,4 mg/l</p> <p>Effect dose concentration: NOEC</p> <p>Exposure time: 28 day(s)</p>
Substance	TAAE
Aquatic toxicity, crustacean	<p>Value: 143 mg/l</p> <p>Effect dose concentration: EC50</p> <p>Exposure time: 48 hour(s)</p> <p>Value: 22 mg/l</p> <p>Effect dose concentration: NOEC</p> <p>Exposure time: 21 day(s)</p>
Ecotoxicity	The product mixture has not been tested. The product has been classified as hazardous to the environment based on its ingredients. Toxic to aquatic life with long lasting effects. Prevent entry into drains, sewers, waterways or soil.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	Gasoline, MTBE, ETBE, TAAE and TAME: Does not hydrolyse in water. Volatile compounds undergo atmospheric degradation.
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Biodegradability

Comments: Gasoline hydrocarbons: Slowly biodegradable.
 MTBE, ETBE, TAEE and TAME: Very slowly biodegradable.
 Ethanol: Quickly biodegradable.
 Under anaerobic conditions, the degradation is very slow. Evaporation is the quickest and most significant degradation process in surface water, sediment and soil.

12.3. Bioaccumulative potential

Bioconcentration factor (BCF)

Value: 1,5
 Species: Fish
 Comments: MTBE. Not bioaccumulative.

Bioaccumulation, evaluation

Gasoline hydrocarbons may be bioaccumulative (log Kow > 3). TAEE may be bioaccumulative (log Kow = 2.95-3.35). ETBE, TAME ja etanoli ovat ei kertyviä (log Kow = -0,77 – 1,55).

12.4. Mobility in soil

Mobility

The product readily evaporates from soil and water surfaces. Some of the components are partly watersoluble and readily evaporate from water solution (MTBE, ETBE, TAEE, ethanol, TAME, isobutanol, benzene and toluene). The product may leach through soil and pollute groundwater. Large-molecule petrol hydrocarbons may absorb into soil or sediment organic matter (log Kow > 3). Under anaerobic conditions, the degradation is very slow.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Endocrine disrupting properties

Endocrine disrupting properties

There is no toxicological data available about the product as such. MTBE (CAS: 1634-04-4) was admitted in the community roll-out plan (CoRAP substance list) due to its suspected endocrine disrupting effects.

12.7. Other adverse effects

Additional ecological information

The product forms a film on the water surface, which can affect the oxygen balance and damage the organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical

Hazardous waste. Dispose of in accordance with local and national regulations.

SECTION 14: Transport information

14.1. UN number

ADR/RID/ADN

3475

IMDG	3475
ICAO/IATA	3475

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	ETHANOL AND GASOLINE MIXTURE
ADR/RID/ADN	ETHANOL AND GASOLINE MIXTURE
IMDG	ETHANOL AND GASOLINE MIXTURE
ICAO/IATA	ETHANOL AND GASOLINE MIXTURE

14.3. Transport hazard class(es)

ADR/RID/ADN	3
Classification code ADR/RID/ADN	F1
IMDG	3
ICAO/IATA	3

14.4. Packing group

ADR/RID/ADN	II
IMDG	II
ICAO/IATA	II

14.5. Environmental hazards

IMDG Marine pollutant	Yes.
Comments	Toxic to aquatic life with long lasting effects.

14.6. Special precautions for user

Special safety precautions for user	Keep away from sources of heat or ignition. Avoid contact with skin or eyes and inhalation of vapours.
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14.7. Maritime transport in bulk according to IMO instruments

Transport in bulk (yes/no)	No
Product name	ETHANOL AND GASOLINE MIXTURE

Additional information

Hazard label ADR/RID/ADN	3
Hazard label IMDG	3
Hazard label ICAO/IATA	3

ADR/RID Other information

Tunnel restriction code	D/E
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Transport category	2
Hazard No.	33
Other applicable information ADR/ RID	33

IMDG Other information

EmS	F-E, S-E
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SECTION 15: Regulatory information

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


Legislation and regulations	The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) The information provided in the safety data sheet is based on current knowledge and valid national and EU legislation.
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15.2. Chemical safety assessment

Chemical safety assessment performed	No
Chemical safety assessment	Chemical safety assessment has been performed for the following ingredients: Gasoline. Ethanol.

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H220 Extremely flammable gas. H224 Extremely flammable liquid and vapour. H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H340 May cause genetic defects H350 May cause cancer . H361d Suspected of damaging the unborn child. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H411 Toxic to aquatic life with long lasting effects.
CLP classification, notes	The classification is based on the calculation method in accordance with Regulation (EC) No 1272/2008 [CLP / GHS].
Training advice	Employees must read the safety data sheet.

Key literature references and sources for data	Regulations, databases, literature. Finnish-language SDS for the product (15 January 2020)
Abbreviations and acronyms used	<p>CLP: Regulation (EC) No. 1272/2008 of the European Parliament and of the Council 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.</p> <p>DSD: Dangerous Substances Directive - Council Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.</p> <p>DPD: Dangerous Preparations Directive - Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.</p> <p>OEL (HTP): Occupational exposure limit</p> <p>DNEL: Derived No-Effect Level</p> <p>EL50: Effective level 50 % (median effective level): loading rate of the substance which kills or immobilizes 50 % of exposed organisms</p> <p>IL50: Inhibitory level: concentration that inhibits a biological function by 50%.</p> <p>LD50: Lethal dose: dose that kills 50% of exposed organisms.</p> <p>LL50: Lethal level: loading rate that kills 50% of exposed organisms.</p> <p>NOEC: No Observable Effect Concentration.</p> <p>NOELR: No Observable Effect Loading Rate.</p> <p>IC20: Inhibitory level: concentration at which a monitored function is inhibited in 20 % of exposed organisms.</p> <p>IC25: Inhibitory concentration: concentration at which a monitored function is inhibited in 25 % of exposed organisms.</p>
Information added, deleted or revised	<p>28.10.2022: Classification and labelling changed. Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.</p> <p>24.09.2021: Update according to Annex II of the REACH Regulation ([EU] 2020/878). Section 1 Identification of the substance/mixture and the company undertaking Product identification data updated.</p>
Last update date	28.10.2022
Version	3
Contents or index of annexed ES	<p>Distribution of the substance - Industrial</p> <p>Use as a fuel - Industrial, Professional, Consumers</p>
Exposure scenario	 Gasoline ES_02012020.pdf