SAFETY DATA SHEET

Gasoline 95 E10, 98 E5, sulphur-free, summer grade, winter grade

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	Gasoline 95 E10, 98 E5, sulphur-free, summer grade, winter grade
UFI	T5GK-0NFR-GG0Y-7J9Q
Synonyms	95E10, 98E5
Article no.	130530

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

Use of the substance / mixture	Distribution of Substance Use as a fuel See section 16 for PROC/SU/ERC-codes for identified uses.
Main intended use	PC-FUE-1 Fuels for vehicles and machinery

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; H361fd Aquatic Chronic 2; H411

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	Gasoline ≥ 78 %, MTBE ≤ 22 %, ETBE ≤ 22 %, 2-Methoxy-2-methylbutane ≤ 22 %, TAEE < 10 %, Ethanol ≤ 10 %, Hydrocarbons (naphtha type fraction) < 5 %, Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich < 5 %
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 H361fd Suspected of damaging fertility. 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.
Health effect	May irritate eyes.
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
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	≥ 78 %	
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	≤ 22 %	
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	≤ 22 %	
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	≤ 22 %	
TAEE	CAS No.: 919-94-8 REACH Reg. No.: 01-2119489926-16-XXXX	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H336	< 10 %	
Ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 REACH Reg. No.:	Flam. Liq. 2; H225 Eye Irrit. 2; H319; SCL C ≥ 50 %	≤ 10 %	

	01-2119457610-43-XXXX		
Methanol	CAS No.: 67-56-1 EC No.: 200-659-6 REACH Reg. No.: 01-2119433307-44-XXXX	Flam. Liq. 2; H225 Acute tox. 3; H331 Acute tox. 3; H311 Acute tox. 3; H301 STOT SE 1; H370	< 3 %
Hydrocarbons (naphtha type fraction)	EC No.: 700-918-8 REACH Reg. No.: 01-2120052681-60	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Asp. Tox. 1; H304 Repr. 2; H361 Muta. 1B; H340 Carc. 1B; H350 STOT SE 3; H336 Aquatic Chronic 2; H411	< 5 %
Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich	CAS No.: 1174918-63-8 EC No.: 930-397-4 REACH Reg. No.: 01-2119497828-14-XXXX	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361 STOT SE 3; H336 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	< 5 %

Description of the mixture	Mixture of petroleum products, oxygenates, renewable hydrocarbons (naphtha type fraction) and additives. Aromatic hydrocarbons ≤ 35 vol-%. 95 E10 grade gasoline: ethanol ≤ 10 vol-%, total ethers ≤ 22 vol-%. 98 E5 grade gasoline: ethanol ≤ 5 vol-%, total ethers ≤ 15 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 product has been inhaled, remove victim to fresh air and obtain medical attention.
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.

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

Medical treatment	Symptomatic treatment.

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	Toxic or harmful gases may be formed: complex mixtures of airborne particles, gases (smoke), carbon monoxide, oxides of sulfur, 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Avoid contact with skin or eyes.
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.

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Gasoline	CAS No.: 86290-81-5	Limit value (8 h) : 100 mg/m³ Comments: Petroleum ethers, group 3 Limit value (8 h) : 1 ppm Limit value (8 h) : 3,25 mg/m³ **Limit value (short term)** Value: 48 mg/m³ Comments: Benzene. Skin (can absorb through skin) . Limit value (8 h) : 25 ppm Limit value (8 h) : 81 mg/m³ **Limit value (short term)** Value: 100 ppm **Limit value (short term)** Value: 380 mg/m³ Comments: Toluene. Skin (can absorb through skin) . Limit value (8 h) : 20 ppm Limit value (8 h) : 72 mg/m³ Comments: N-hexane. Skin (can absorb through skin) .	
MTBE	CAS No.: 1634-04-4	Limit value (8 h) : 50 ppm Limit value (8 h) : 180 mg/m³ **Limit value (short term)** Value: 100 ppm **Limit value (short term)** Value: 360 mg/m³	TWA Year: 2016
ETBE	CAS No.: 637-92-3	Limit value (8 h) : 5 ppm Limit value (8 h) : 25 mg/m³	
2-Methoxy-2-methylbutane	CAS No.: 994-05-8	Limit value (8 h) : 20 ppm Limit value (8 h) : 84 mg/m³	
Ethanol	CAS No.: 64-17-5	Limit value (8 h) : 1000 ppm Limit value (8 h) : 1900 mg/m³ **Limit value (short term)** Value: 1300 ppm **Limit value (short term)** Value: 2500 mg/m³	
Methanol	CAS No.: 67-56-1	Limit value (8 h) : 200 ppm Limit value (8 h) : 270 mg/m³ **Limit value (short term)** Value: 250 ppm **Limit value (short term)** Value: 330 mg/m³ Comments: Skin (can	

	absorb through skin) .
Hydrocarbons (naphtha type fraction)	Comments: Occupational exposure limits according to the critical components in the renewable naphtha (benzene, n-hexane and toluene)
Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich	CAS No.: 1174918-63-8
Control parameters comments	Biological toluene limit: blood toluene concentration 500 nmol/l (BIOL 2011/FIN). Individual limit values can be applied for hydrocarbons. *Occupational exposure monitoring method: SFS-EN 689, NIOSH Method 5026.

DNEL / PNEC

Substance	Gasoline
DNEL	**Group:** Professional **Route of exposure:** Acute inhalation (systemic) **Value:** 1300 mg/m³ **Reference:** 15 minutes. **Group:** Professional **Route of exposure:** Acute inhalation (local) **Value:** 1100 mg/m³ **Reference:** 15 minutes. **Group:** Professional **Route of exposure:** Long-term inhalation (local) **Value:** 840 mg/m³ **Reference:** 8 h. **Group:** Consumer **Route of exposure:** Acute inhalation (systemic) **Value:** 1200 mg/m³ **Reference:** 15 minutes. **Group:** Consumer **Route of exposure:** Acute inhalation (local) **Value:** 640 mg/m³ **Reference:** 15 minutes. **Group:** Consumer **Route of exposure:** Long-term inhalation (local) **Value:** 180 mg/m³ **Reference:** 24 h.
Substance	Hydrocarbons (naphtha type fraction)
DNEL	**Group:** Professional **Route of exposure:** Long-term inhalation (systemic) **Value:** 3,25 mg/m³ **Group:** Professional **Route of exposure:** Long-term dermal (systemic) **Value:** 234 mg/kg bw/day

	Group: Consumer **Route of exposure:** Long-term inhalation (systemic) **Value:** 3,25 µg/m³ **Group:** Consumer **Route of exposure:** Long-term dermal (systemic) **Value:** 234 µg/kg bw/day **Group:** Consumer **Route of exposure:** Long-term oral (systemic) **Value:** 0,234 µg/kg bw/day
PNEC	**Route of exposure:** Freshwater **Value:** 0,88 - 2100 µg/l **Reference:** Estimated with the PETRORISK tool. **Route of exposure:** Saltwater **Value:** 0,88 - 2100 µg/l **Reference:** Estimated with the PETRORISK tool. **Route of exposure:** Sediment **Value:** 0,33 - 6,7 mg/kg **Reference:** Estimated with the PETRORISK tool. **Route of exposure:** Soil **Value:** 0,13 - 2,7 mg/kg **Reference:** Estimated with the PETRORISK tool. **Route of exposure:** Sewage treatment plant STP **Value:** 13 - 34000 µg/l **Reference:** Estimated with the PETRORISK tool.
Substance	Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich
DNEL	**Group:** Professional **Route of exposure:** Long-term inhalation (systemic) **Value:** 93 mg/m³ **Group:** Professional **Route of exposure:** Long-term dermal (systemic) **Value:** 13 mg/kg bw/day **Group:** Consumer **Route of exposure:** Long-term inhalation (systemic) **Value:** 20 mg/m³ **Group:** Consumer **Route of exposure:** Long-term dermal (systemic) **Value:** 7 mg/kg bw/day **Group:** Consumer **Route of exposure:** Long-term oral (systemic) **Value:** 6 mg/kg bw/day

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.

Eye / face protection

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

Hand protection

Suitable gloves type	Wear appropriate chemical-resistant, impervious protective 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). Use respiratory protection according to EN 140 and EN 141.
Respiratory protection, comments	The use of filter devices should be limited to max. 2 hrs per day. Filter devices must not be used when oxygen levels are low (< 17 vol.-%). If significant amounts of mist or vapour form, use supplied-air respirator (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	Liquid
Colour	Clear or slightly yellowish Clear
Odour	Typical odour of hydrocarbons and ethers
Odour limit	Comments: Unknown

pH	Comments: Unknown
Melting point / melting range	Value: < -20 °C
Boiling point / boiling range	Value: 20 - 220 °C Test reference: EN ISO 3405
Flash point	Value: < 0 °C Test reference: EN ISO 2719
Evaporation rate	Comments: Unknown
Flammability	Unknown
Lower explosion limit with unit of measurement	Value: 1 vol% Comments: Calculated
Upper explosion limit with units of measurement	Value: 8,1 vol% Comments: Calculated
Vapour pressure	Value: 35 - 100 kPa Comments: Estimation Temperature: 38 °C
Vapour density	Value: > 3
Particle characteristics	Comments: Not relevant.
Relative density	Value: 0,7 - 0,79 Test reference: EN ISO 12185 Comments: Water = 1
Solubility	Name: MTBE Value: 41,9 g/l Name: ETBE Value: 16,4 g/l Name: TAME Value: 10,4 g/l Name: TAEE Value: 3,9 g/l Name: Ethanol Comments: Fully soluble Name: Methanol Comments: Fully soluble Name: Renewable hydrocarbons (naphtha type fraction) Comments: Slightly soluble Comments: Soluble in organic solvents. Slightly 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 Comments: Methanol log Kow = -0,77 Comments: Renewable hydrocarbons (naphtha type fraction) log Kow = 4,7
Auto-ignition temperature	Value: > 280 °C
Decomposition temperature	Comments: Unknown
Viscosity	Value: < 1 mm2/s Test reference: DIN EN ISO 3104 Temperature: 38 °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	No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Substance	Gasoline
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** > 5000 mg/kg **Animal test species:** Rat **Test reference:** OECD 401 **Effect tested:** LC50 **Route of exposure:** Inhalation. **Value:** > 5610 mg/m³ **Animal test species:** Rat **Test reference:** OECD 403 **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** > 2000 mg/kg **Animal test species:** Rabbit **Test reference:** OECD 402
Substance	MTBE
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** > 2000 mg/kg **Animal test species:** Rat **Effect tested:** LC50 **Route of exposure:** Inhalation. **Duration:** 4 hour(s) **Value:** > 5000 mg/m³ **Animal test species:** Rat **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** > 2000 mg/kg **Animal test species:** Rabbit
Substance	ETBE
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** > 2000 mg/kg
Substance	2-Methoxy-2-methylbutane
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** 1602 - 2417 mg/kg **Animal test species:** Rat **Test reference:** OECD 401 **Effect tested:** LC50 **Route of exposure:** Inhalation. **Duration:** 4 hour(s) **Value:** > 5400 mg/m³ **Animal test species:** Rat

	Test reference: OECD 403 **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** > 2000 mg/kg **Animal test species:** Rabbit **Test reference:** OECD 402
Substance	TAEE
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** > 2000 mg/kg
Substance	Ethanol
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** > 2000 mg/kg **Animal test species:** Rat **Effect tested:** LC50 **Route of exposure:** Inhalation. **Value:** > 5000 mg/m³ **Animal test species:** Rat
Substance	Methanol
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** 1187 - 2769 mg/kg **Animal test species:** Rat **Effect tested:** LC50 **Route of exposure:** Inhalation. **Duration:** 4 hour(s) **Value:** 128 000 mg/m³ **Animal test species:** Rat **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** 17100 mg/kg **Animal test species:** Rabbit **Comments:** Estimation.
Substance	Hydrocarbons (naphtha type fraction)
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Duration:** 24 hour(s) **Value:** > 2000 mg/kg **Animal test species:** Rat **Test reference:** OECD 420 **Effect tested:** LC50 **Route of exposure:** Inhalation. **Duration:** 8 hour(s) **Value:** 23 400 mg/m³

	Animal test species: Rat **Effect tested:** LD50 **Route of exposure:** Dermal **Duration:** 24 hour(s) **Value:** 2920 mg/kg **Animal test species:** Rabbit
Substance	Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** 16750 mg/kg **Animal test species:** Rat **Test reference:** OECD 401 **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** 3350 mg/kg **Animal test species:** Rabbit **Test reference:** OECD 402 **Effect tested:** LC50 **Route of exposure:** Inhalation (vapour) **Duration:** 4 hour(s) **Value:** 259400 mg/m³ **Animal test species:** Rat **Test reference:** OECD 403
Other toxicological data	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: Gasoline: The product may cause genetic defects. Renewable hydrocarbons (naphtha type fraction): This substance is regarded as germ cell mutagen based on the benzene content in the substance.
Carcinogenicity, other information	Gasoline: The product is suspected of causing cancer. Gasoline contains benzene, which may cause cancer. Renewable hydrocarbons (naphtha type fraction): The substance is considered carcinogenic based on the benzene content.
Reproductive toxicity	Gasoline: Suspected of damaging fertility. Suspected of damaging the unborn child Gasoline contains n-hexane, which may damage fertility and suspected of damaging the unborn child. Gasoline contains toluene, which may damage the unborn child. Renewable hydrocarbons (naphtha type fraction): The substance is suspected of damaging fertility and damaging the unborn child based on the n-hexane and

	toluene content.
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	There is no toxicological data available about the product as such. MTBE (CAS: 1634-04-4) The substance 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	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	**Value:** 574 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s) **Value:** 299 mg/l **Effect dose concentration:** NOEC **Exposure time:** 31 day(s)
Substance	ETBE
Aquatic toxicity, fish	**Value:** 574 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s) **Value:** 299 mg/l **Effect dose concentration:** NOEC **Exposure time:** 31 day(s)
Substance	2-Methoxy-2-methylbutane
Aquatic toxicity, fish	**Value:** 574 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s)

	Value: 279 mg/l **Exposure time:** 31 day(s) **Comments:** Effect dose concentration: IC20 **Value:** 308 mg/l **Exposure time:** 31 day(s) **Comments:** Effect dose concentration: IC25
Substance	TAEE
Aquatic toxicity, fish	**Value:** 240 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s) **Value:** 279 mg/l **Exposure time:** 31 day(s) **Comments:** Effect dose concentration: IC20 **Value:** 308 mg/l **Exposure time:** 31 day(s) **Comments:** Effect dose concentration: IC25
Substance	Ethanol
Aquatic toxicity, fish	**Value:** 14,2 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s)
Substance	Methanol
Aquatic toxicity, fish	**Value:** 15400 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s)
Substance	Hydrocarbons (naphtha type fraction)
Aquatic toxicity, fish	**Value:** 10 mg/l **Effect dose concentration:** LL50 **Exposure time:** 96 hour(s) **Test reference:** OECD 203
Substance	Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich
Aquatic toxicity, fish	**Toxicity type:** Acute **Value:** 13,3 mg/l **Effect dose concentration:** LL50 **Test duration:** 96 hour(s) **Test reference:** QSAR **Toxicity type:** Chronic **Value:** 3,0 mg/l **Effect dose concentration:** NOELR **Exposure time:** 28 day(s) **Test reference:** QSAR
Substance	Gasoline
Aquatic toxicity, algae	**Value:** 3,7 mg/l **Effect dose concentration:** EL50 **Exposure time:** 96 hour(s)

	Comments: Gasoline hydrocarbons. **Value:** 0,5 mg/l **Exposure time:** 72 hour(s) **Comments:** Effect dose concentration: NOELR Gasoline hydrocarbons.
Substance	MTBE
Aquatic toxicity, algae	**Value:** 491 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s) **Value:** 105 mg/l **Exposure time:** 96 hour(s) **Comments:** Effect dose concentration: IC20
Substance	ETBE
Aquatic toxicity, algae	**Value:** 1100 mg/l **Effect dose concentration:** EC50 **Exposure time:** 72 hour(s) **Value:** 7,5 mg/l **Effect dose concentration:** NOEC **Exposure time:** 72 hour(s)
Substance	2-Methoxy-2-methylbutane
Aquatic toxicity, algae	**Value:** 230 mg/l **Effect dose concentration:** EC50 **Exposure time:** 72 hour(s) **Value:** 77 mg/l **Effect dose concentration:** NOEC **Exposure time:** 72 hour(s)
Substance	TAEE
Aquatic toxicity, algae	**Value:** 160 mg/l **Effect dose concentration:** EC50 **Exposure time:** 72 hour(s) **Value:** 36 mg/l **Effect dose concentration:** NOEC **Exposure time:** 72 hour(s)
Substance	Ethanol
Aquatic toxicity, algae	**Value:** 275 mg/l **Effect dose concentration:** EC50 **Exposure time:** 3 day(s) **Value:** 11,5 mg/l **Effect dose concentration:** EC10 **Exposure time:** 3 day(s)
Substance	Methanol
Aquatic toxicity, algae	**Value:** 22 000 mg/l **Effect dose concentration:** EC50

	Exposure time: 96 hour(s) **Comments:** Estimation.
Substance	Hydrocarbons (naphtha type fraction)
Aquatic toxicity, algae	**Value:** > 100 mg/l **Effect dose concentration:** EL50 **Exposure time:** 72 hour(s)
Substance	Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich
Aquatic toxicity, algae	**Toxicity type:** Acute **Value:** 9,9 mg/l **Effect dose concentration:** EL50 **Test duration:** 72 hour(s) **Test reference:** QSAR
Substance	Gasoline
Aquatic toxicity, crustacean	**Value:** 4,5 mg/l **Effect dose concentration:** EL50 **Exposure time:** 48 hour(s) **Comments:** Gasoline hydrocarbons. **Value:** 10 mg/l **Effect dose concentration:** EL50 **Exposure time:** 21 day(s) **Comments:** Gasoline hydrocarbons. **Value:** 0,5 mg/l **Exposure time:** 48 hour(s) **Comments:** Effect dose concentration: NOELR Gasoline hydrocarbons.
Substance	MTBE
Aquatic toxicity, crustacean	**Value:** 44 mg/l **Effect dose concentration:** LC50 **Exposure time:** 96 hour(s) **Value:** 26 mg/l **Effect dose concentration:** NOEC **Exposure time:** 28 day(s) **Value:** 50 mg/l **Effect dose concentration:** LOEC **Exposure time:** 28 day(s)
Substance	ETBE
Aquatic toxicity, crustacean	**Value:** 37 mg/l **Effect dose concentration:** EC50 **Exposure time:** 96 hour(s) **Value:** 3,4 mg/l **Effect dose concentration:** NOEC **Exposure time:** 28 day(s)
Substance	2-Methoxy-2-methylbutane
Aquatic toxicity, crustacean	**Value:** 14 mg/l

	Effect dose concentration: LC50 **Exposure time:** 96 hour(s) **Value:** 3,4 mg/l **Effect dose concentration:** NOEC **Exposure time:** 28 day(s)
Substance	TAEE
Aquatic toxicity, crustacean	**Value:** 143 mg/l **Effect dose concentration:** EC50 **Exposure time:** 48 hour(s) **Value:** 22 mg/l **Effect dose concentration:** NOEC **Exposure time:** 21 day(s)
Substance	Ethanol
Aquatic toxicity, crustacean	**Value:** 5012 mg/l **Effect dose concentration:** LC50 **Exposure time:** 48 hour(s) **Value:** 2 mg/l **Effect dose concentration:** NOEC **Exposure time:** 10 day(s)
Substance	Methanol
Aquatic toxicity, crustacean	**Value:** > 10 000 mg/l **Effect dose concentration:** EC50 **Exposure time:** 48 hour(s)
Substance	Hydrocarbons (naphtha type fraction)
Aquatic toxicity, crustacean	**Value:** 7,6 mg/l **Effect dose concentration:** EL50 **Exposure time:** 48 hour(s) **Test reference:** OECD 202
Substance	Gasoline
Impact on sewage treatment	**Value:** 15,4 mg/l **Effect dose concentration:** EC50 **Exposure time:** 40 hour(s) **Comments:** Toxicity to micro-organisms (sludge).
Substance	MTBE
Impact on sewage treatment	**Value:** 710 mg/l **Effect dose concentration:** EC10 **Exposure time:** 18 hour(s) **Comments:** Toxicity to micro-organisms.
Substance	ETBE
Impact on sewage treatment	**Value:** 510 mg/l **Effect dose concentration:** EC50 **Exposure time:** 16 hour(s) **Comments:** Toxicity to micro-organisms (sludge). **Value:** 78 mg/l

	Effect dose concentration: NOEC **Exposure time:** 16 hour(s) **Comments:** Toxicity to micro-organisms (sludge).
Substance	2-Methoxy-2-methylbutane
Impact on sewage treatment	**Value:** 510 mg/l **Effect dose concentration:** EC50 **Exposure time:** 16 hour(s) **Comments:** Toxicity to micro-organisms (sludge). **Value:** 78 mg/l **Effect dose concentration:** NOEC **Exposure time:** 16 hour(s) **Comments:** Toxicity to micro-organisms (sludge).
Substance	TAEE
Impact on sewage treatment	**Value:** > 483 mg/l **Effect dose concentration:** EC10 **Exposure time:** 16 hour(s) **Comments:** Toxicity to micro-organisms (sludge).
Substance	Methanol
Impact on sewage treatment	**Value:** > 1000 mg/l **Effect dose concentration:** IC50 **Exposure time:** 3 hour(s) **Comments:** Toxicity to micro-organisms (sludge).
Substance	Hydrocarbons (naphtha type fraction)
Impact on sewage treatment	**Value:** 34,78 mg/l **Effect dose concentration:** EL10 **Exposure time:** 3 hour(s) **Comments:** Toxicity to micro-organisms (sludge).
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, TAEE, TAME and Renewable hydrocarbons (naphtha type fraction): Does not hydrolyse in water. Volatile compounds undergo atmospheric degradation. Renewable hydrocarbons (naphtha type fraction): Contains both non-biodegradable hydrocarbons and readily biodegradable hydrocarbons. Hydrolysis is not a significant route of degradation for the substance. Under anaerobic conditions, the degradation is very slow. Evaporation is the quickest and most significant degradation process in surface water, sediment and soil.
Biodegradability	Value: 8,05 % Test reference: OECD 301F Comments: Renewable hydrocarbons (naphtha type fraction): Not easily biodegradable. Test period: 28 - 42 day(s)

	Comments: Gasoline hydrocarbons: Slowly biodegradable. MTBE, ETBE, TAEE and TAME: Very slowly biodegradable. Ethanol and methanol: Quickly biodegradable.
Substance	Hydrocarbons, C5-C7, n-alkanes, isoalkanes, n-hexane rich
Biodegradability	**Test reference:** OECD 301 F

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, ethanol and methanol are not bioaccumulative (log Kow = -0.77 – 1.55). Renewable hydrocarbons (naphtha type fraction): The range of log Kow values and BCF-factors estimated with the PETRORISK tool indicate that there might be constituents present in the substance having potential for bioaccumulation. However, there is evidence that the majority of organic chemicals with high log Pow values (> ca. 7) would show low tendency to bioaccumulate.

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, TAME, ethanol, methanol, 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. Renewable hydrocarbons (naphtha type fraction): Based on low water solubility and relatively high volatility and absorption potential to organic matter the migration to groundwater is expected to be low. According to the PETRORISK modelling results, major part of the emissions of the substance are distributed to air (ca. 97.6 %). Fractions distributed to other environmental compartments is expected to be low; water (1.7 %), sediment (0.45 %), soil (0.25 %).

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) The substance 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. Empty containers may contain flammable remnants of product. Dispose of empty containers for recovery, recycling or waste.

SECTION 14: Transport information

14.1. UN number

ADR/RID/ADN	1203
IMDG	1203
ICAO/IATA	1203

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

ADR/RID/ADN	3
Classificaton 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

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.

14.7. Maritime transport in bulk according to IMO instruments

Transport in bulk (yes/no)	No

Product name	GASOLINE

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
Transport category	2
Hazard No.	33
Other applicable information ADR/RID	33

IMDG Other information

EmS	F-E, S-E

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)

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H224 Extremely flammable liquid and vapour. H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H311 Toxic in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H336 May cause drowsiness or dizziness. H340 May cause genetic defects H350 May cause cancer . H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

	H361 Suspected of damaging fertility or the unborn child H370 Causes damage to organs H373 May cause damage to organs through prolonged or repeated exposure H411 Toxic to aquatic life with long lasting effects.
Recommended restrictions on use	Identified uses, gasoline: Distribution of the substance (SU3; PROC: 1, 2, 3, 8a, 8b, 15; ERC: 4, 5, 6a, 6b, 6c, 6d, 7) Use as a fuel Industrial (SU 3; PROC: 1, 2, 3, 8a, 8b, 16; ERC: 7) Professional (SU 22; PROC: 1, 2, 3, 8a, 8b, 16; ERC: 9a, 9b) Consumers (SU 21; PROC 13; ERC: 9a, 9b) MOTOR FUEL USE ONLY. NO CLEANING AND SOLVENT USE. DO NOT TRY TO SUCK GASOLINE USING YOUR MOUTH.
Additional information	Neot Oy, Tuotelaatu, +358 10 768 0862, tuotelaatu@neot.fi
Key literature references and sources for data	Regulations, databases, literature. Concawe Report No. 6/05, 01/54, 11/10. Chemical safety reports. (Gasoline, MTBE; ETBE, TAME, TAEE, Ethanol, Methanol, renewable hydrocarbons (naphtha type fraction)) Finnish-language SDS for the product (15 January 2020)
Abbreviations and acronyms used	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. 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. 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. OEL (HTP): Occupational exposure limit DNEL: Derived No-Effect Level DMEL: Derived Minimum Effect Level EL50: Effective level 50 % (median effective level): loading rate of the substance which kills or immobilizes 50 % of exposed organisms IL50: Inhibitory level: concentration that inhibits a biological function by 50%. LD50: Lethal dose: dose that kills 50% of exposed organisms. LL50: Lethal level: loading rate that kills 50% of exposed organisms. NOEC: No Observable Effect Concentration. NOELR: No Observable Effect Loading Rate. IC20: Inhibitory level: concentration at which a monitored function is inhibited in 20 % of exposed organisms. IC25: Inhibitory concentration: concentration at which a monitored function is inhibited in 25 % of exposed organisms.
Information added, deleted or revised	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.

	27.6.2022: Section 1 Identification of the substance/mixture and the company undertaking
Last update date	28.10.2022
Version	6
Exposure scenario	Gasoline ES_02012020.pdf