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17/04/2023

**Revision date**  
03/01/2024

**Revision Number**  
1  
Country-Language: FIN-EN

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

### 1.1. Product identifier

**Product Name** Neste Tempera Non-Road Diesel; Neste Pro Non-Road Diesel; MGODMA; DMA Barge; Neste Marine 0.1 Co-processed (DMA)

**Product Code(s)** 13779  
**Safety data sheet number** 13779  
**Other means of identification** Internal identification: 160041, 160051, 160055, 160061, 160071; 160350, 160360, 160370, 160205, 160216; 160364; 160670; 160376, 160377, 160361, 160207, 160215

Previous product name: Diesel for non-road use; Neste light fuel oil for heating and non-road use; MGODMA; DMA Barge

**Unique Formula Identifier (UFI)** 7QWY-XPC3-6812-AW54

**Pure substance/mixture** Mixture

Contains Fuels, diesel, Renewable hydrocarbons (diesel type fraction), Petroleum diesel/gas oil fraction, co-processed with renewable hydrocarbons of plant or animal origin

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

**Recommended use** Use as a fuel (ES12a, ES12b, ES12c)

### 1.3. Details of the supplier of the safety data sheet

**Supplier**  
Neste Oyj  
Keilaranta 21, Espoo, P.O.B. 95, FIN-00095 NESTE, FINLAND  
Tel. +358 10 45811  
SDS@neste.com (chemical safety)

### 1.4. Emergency telephone number

Emergency Telephone No information available

Emergency Telephone - §45 - (EC)1272/2008	
Europe	112
Denmark	Gifflinjen: +45 8212 1212
Estonia	Poison information telephone number: 16662, calling from abroad: (+372) 7943 794
Finland	+358 800 147 111, +358 9 471 977, Poison Information Centre
Germany	+49 32 211121704, Chemwatch Emergency Response Phone Number
Latvia	Valsts toksikoloģijas centrs: (+371) 6704 2473
Netherlands	NVIC (088 755 8000), Only for the purpose of informing medical personnel in case of acute intoxications.
Poland	+48 22 208 6439, Chemwatch Emergency Response Telephone Number
Sweden	När det är akut: 112, begär giftinformation. I mindre akuta fall 010-456 6700, Giftinformationscentralens direktnummer

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flammable liquids	Category 3 - (H226)
Acute toxicity - Inhalation (Vapours)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Aspiration hazard	Category 1 - (H304)
Chronic aquatic toxicity	Category 2 - (H411)

### 2.2. Label elements

Contains Fuels, diesel, Renewable hydrocarbons (diesel type fraction), Petroleum diesel/gas oil fraction, co-processed with renewable hydrocarbons of plant or animal origin



#### Signal word

Danger

#### Hazard statements

H226 - Flammable liquid and vapour

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation

H332 - Harmful if inhaled

H351 - Suspected of causing cancer

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

#### Precautionary Statements - EU (§28, 1272/2008)

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

P261 - Avoid breathing vapours

P273 - Avoid release to the environment

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P331 - Do NOT induce vomiting

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap

### 2.3. Other hazards

Evaporates slowly. Risk of soil and ground water contamination.

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Fuels, diesel 68334-30-5	>= 60%	01-2119484664-27	269-822-7	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Acute Tox. 4 (H332) Carc. 2 (H351) STOT RE 2 (H373) Aquatic Chronic 2 (H411)	-	-	-
Renewable hydrocarbons (diesel type fraction) -	<= 50%	01-2119450077-42	-	Asp. Tox. 1 (H304)	-	-	-
Petroleum diesel/gas oil fraction, co-processed with renewable hydrocarbons of plant or animal origin -	<= 10 %	01-2120091562-55	-	Aquatic Chronic 2 (H411) Asp. Tox. 1 (H304) Flam. Liq. 3 (H226) Acute Tox. 4 (H332) STOT RE 2 (H373) Skin Irrit. 2 (H315) Carc. 2 (H351)	-	-	-

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

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

#### Additional information

Mixture of renewable raw material fuel, petroleum product and additives. Contains kerosine streams and straight-run and hydrocracked gas oil streams.

Renewable hydrocarbons (diesel type fraction): Identity outside the EU (CAS number and name of the substance): Alkanes, C10-20-branched and linear, CAS 928771-01-1.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General advice

IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

#### Inhalation

If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid contact with skin. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention.

#### Eye contact

Get medical attention if irritation develops and persists. Rinse immediately with plenty of

water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Delayed pulmonary edema may occur. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists.

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

<b>Symptoms</b>	Irritating to skin. Harmful by inhalation. Aspiration hazard. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. May cause redness and tearing of the eyes.
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#### **4.3. Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.

#### **5.2. Special hazards arising from the substance or mixture**

<b>Specific hazards arising from the chemical</b>	Flammable. Risk of ignition. Containers may explode when heated.
<b>Hazardous combustion products</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide.

#### **5.3. Advice for firefighters**

<b>Special protective equipment and precautions for fire-fighters</b>	Prevent fire extinguishing water from contaminating surface water or the ground water system. Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it without risk. Wear positive pressure self-contained breathing apparatus (SCBA). Use personal protection equipment.
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### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Ensure adequate ventilation. Do not touch or walk
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through spilled material.

**For emergency responders**

Evacuate area. Prevent unauthorized access. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction. Flash back possible over considerable distance.

**6.2. Environmental precautions**

**Environmental precautions**

Risk of soil and ground water contamination. Avoid release to the environment. Keep out of drains, sewers, ditches and waterways. Prevent further leakage or spillage if safe to do so.

**6.3. Methods and material for containment and cleaning up**

**Methods for containment**

Stop leak if you can do it without risk. Do not touch or walk through spilled material. Keep out of drains, sewers, ditches and waterways. Risk of soil and ground water contamination. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

**Methods for cleaning up**

Pay attention to the fire and health hazards caused by the product. Take precautionary measures against static discharges. Dam up. Take up with sand, earth or other non-combustible absorbent material. Pick up and transfer to properly labelled containers.

**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections**

See Section 7 for more information, See section 8 for more information. See section 13 for more information.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

The product contains volatile substances which may spread in the atmosphere. Avoid breathing vapours or mists. Use only outdoors or in a well-ventilated area. Use with local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes or clothing. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons). Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment.

**General hygiene considerations**

Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions**

Flammable liquid storage. Store away from other materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Do not store near combustible materials. Store in accordance with local regulations.

**7.3. Specific end use(s)**

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure Limits** The individual limit values can be applied for the hydrocarbons. Diesel fuel as total hydrocarbons; ACGIH TLV®-TWA (8h) 100 mg/m<sup>3</sup> (IFV).

**Derived No Effect Level (DNEL) - Workers**

Chemical name	Oral	Dermal	Inhalation
Fuels, diesel 68334-30-5	-	2.9 mg/kg bw/day [4] [6]	68 mg/m <sup>3</sup> , [4] [6], Aerosol 4300 mg/m <sup>3</sup> [4] [7], Aerosol
Renewable hydrocarbons (diesel type fraction) -	-	42 mg/kg bw/day [4] [6]	147 mg/m <sup>3</sup> [4] [6]

**Notes**

- [4] Systemic health effects.
- [6] Long term.
- [7] Short term.

**Derived No Effect Level (DNEL) - General Public**

Chemical name	Oral	Dermal	Inhalation
Fuels, diesel 68334-30-5	-	1.3 mg/kg bw/day [4] [6]	20 mg/m <sup>3</sup> [4] [6], Aerosol 2600 mg/m <sup>3</sup> [4] [7], Aerosol
Renewable hydrocarbons (diesel type fraction) -	-	18 mg/kg bw/day [4] [6]	94 mg/m <sup>3</sup> [4] [6]

**Notes**

- [4] Systemic health effects.
- [6] Long term.
- [7] Short term.

**Predicted No Effect Concentration (PNEC)**

**8.2. Exposure controls**

**Engineering controls** Provide adequate ventilation. Use personal protective equipment and/or local ventilation when needed. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).

**Personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves. PPE - Glove material. : Nitrile rubber. Polyvinyl chloride (PVC). Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Wear suitable gloves tested to EN 374. Change protective gloves regularly.
<b>Skin and body protection</b>	Wear suitable protective clothing. Wear anti-static protective clothing if there is a risk of ignition from static electricity.
<b>Respiratory protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Filter must be changed often enough. Gas and combination filter cartridges must comply with EN 14387. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.
<b>General hygiene considerations</b>	Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	Store in a demarcated bunded area to prevent release to drains and/or watercourses.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Colour</b>	red
<b>Odour</b>	Hydrocarbons. Mild.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	<= 0 °C	Cloud point
<b>Initial boiling point and boiling range</b>	150 - 370 °C	EN ISO 3405
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	6 %, estimated	
<b>Lower flammability or explosive limits</b>	1 %, estimated	
<b>Flash point</b>	> 55 °C	EN ISO 2719
<b>Autoignition temperature</b>	~ 240 °C	Estimated
<b>Decomposition temperature</b>		None known
<b>pH</b>	No data available -	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	<= 4.5 mm <sup>2</sup> /s	@ 40 °C
<b>Dynamic viscosity</b>	No data available	None known
<b>Water solubility</b>	<0.05 g/l @ 20 °C	None known
<b>Solubility(ies)</b>	The product has poor water-solubility.	None known
<b>Partition coefficient</b>	log Kow: > 3	None known
<b>Vapour pressure</b>	< 1 kPa	@ 40 °C
<b>Relative density</b>	0.8 - 0.85	@ 15 °C (EN ISO 12185)
<b>Bulk density</b>	No data available	
<b>Liquid Density</b>	No data available	

Relative vapour density	No data available	None known
Particle characteristics		Not applicable
Particle Size	No information available	
Particle Size Distribution	No information available	

## 9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable

**Oxidising properties** Does not meet the criteria for classification as oxidising

9.2.2. Other safety characteristics

No information available

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

**Reactivity** There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

**Stability** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid** Heat, flames and sparks.

### 10.5. Incompatible materials

**Incompatible materials** Oxidising agent.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

## **SECTION 11: Toxicological information**

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

#### Information on likely routes of exposure

**Acute toxicity** Harmful if inhaled

**Numerical measures of toxicity**



**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Fuels, diesel	> 5000 mg/kg, Rat (OECD 401, 420)	> 4300 mg/kg, Rabbit (OECD 434)	3.6 - 5.4 mg/L, Rat (4 h, OECD 403)
Renewable hydrocarbons (diesel type fraction)	>2000 mg/kg, Rat (EC B1 tris)	> 2000 mg/kg, Rat (EC B3)	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Fuels diesel (OECD 404):. Causes skin irritation. Renewable hydrocarbons (diesel type fraction, EC B4):. Not classified. The product irritates mucous membranes and may cause abdominal discomfort if swallowed.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met. May cause redness and tearing of the eyes. (OECD 405, EC B5).
<b>Respiratory or skin sensitisation</b>	Based on available data, the classification criteria are not met. (OECD 406, EC B6).
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met. (OECD 471, EC B10, B13/14, B17, OECD 475).
<b>Carcinogenicity</b>	Suspected of causing cancer. Fuels, diesel:.. Product may contain cracked gas oil streams.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Fuels, diesel	Carc. 2

<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met. Renewable hydrocarbons (diesel type fraction): OECD 416, . Fuels, diesel: OECD 414.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Fuels, diesel (OECD 410, 411, 413):. May cause damage to organs through prolonged or repeated exposure. Renewable hydrocarbons (diesel type fraction, OECD 408):. Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** This product does not contain substances considered to have endocrine disrupting

properties at levels of 0.1% or higher.

11.2.2. Other information

Other adverse effects No information available.

**SECTION 12: Ecological information**

12.1. Toxicity

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Fuels, diesel	OECD 201, EC C.3, 72 hours, Pseudokirchneriella subcapitata, WAF: EbL50: 10 mg/l NOEL 1 mg/l	OECD 203, EC C.1, 96 hours, Oncorhynchus mykiss (Rainbow trout), WAF: LL <sub>50</sub> : 21 mg/l, NOEL: 10 mg/l  QSAR, 14 days, Oncorhynchus mykiss (Rainbow trout): NOEL: 0,08 mg/l	QSAR, 40 hours, Micro-organisms (wastewater sludge): EL50: > 1000 mg/l NOEL: 3,22 mg/l	OECD 202, EC C.2, 48 hours, Daphnia magna, WAF: EL50: 68 mg/l NOEL: 46 mg/l  QSAR, 21 days, Daphnia magna: NOEL: 0,2 mg/l
Renewable hydrocarbons (diesel type fraction)	OECD 201, 72 hours, Algae, WAF: EL50: > 100 mg/l	OECD 203, 96 h, WAF LL <sub>50</sub> : > 1000 mg/l	OECD 209, 30-180 min, Micro-organisms (wastewater sludge): EC <sub>50</sub> : > 1000 mg/l,	OECD 202, 48 h, Sediment organisms, WAF: par EL50:> 100 mg/l  OECD 211, 21 days, WAF: NOEC: 1 mg/l LOEC,: 3,2 mg/l  OSPAR Protocols, Part A: Sediment Bioassay, 2005, 10 days: NOEC: 373 mg/kg LOEC: 1165 mg/kg LC <sub>50</sub> : 1200 mg/kg

12.2. Persistence and degradability

Persistence and degradability The product contains volatile substances which may spread in the atmosphere. Can be photodegraded in the atmosphere.

Fuels, diesel (68334-30-5)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)			Inherently biodegradable.

Renewable hydrocarbons (diesel type fraction) (-)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready			Rapidly biodegradable

Biodegradability: CO2 Evolution Test (TG 301 B)			
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### 12.3. Bioaccumulative potential

**Bioaccumulation** May bioaccumulate.

#### **Component Information**

### 12.4. Mobility in soil

**Mobility in soil** Evaporates slowly. The product has poor water-solubility. Product can penetrate soil until reaching the surface of ground water. The product contains substances which are bound to particulate matter and are retained in soil.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

### 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.

### 12.7. Other adverse effects

Product causes fouling, and direct contact produces harmful effects e.g. to birds and vegetation. Adsorbed hydrocarbon residues can be harmful to sediment organisms.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. When handling waste, the safety precautions applying to handling of the product should be considered.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

## **SECTION 14: Transport information**

**Note:** This cargo is considered an Energy-rich fuel and effective 1 January 2019 should be carried subject to Annex I of MARPOL, see Annex 12 of MEPC.2/Circ.24. Please also refer to MEPC.1/Circ.879 - GUIDELINES FOR THE CARRIAGE OF ENERGY-RICH FUELS AND THEIR BLENDS

**IMDG**

14.1 UN number or ID number UN1202  
 14.2 UN proper shipping name UN1202 HEATING OIL, LIGHT  
 14.3 Transport hazard class(es) 3  
 14.4 Packing group III  
 14.5 Environmental hazard Marine pollutant  
 14.6 Special precautions for user  
 14.7 Maritime transport in bulk Bulk (MARPOL 73/78, Annex I): Energy-rich fuels  
 according to IMO instruments

**RID**

14.1 UN number or ID number UN1202  
 14.2 UN proper shipping name UN1202 HEATING OIL, LIGHT  
 14.3 Transport hazard class(es) 3  
 14.4 Packing group III  
 14.5 Environmental hazard Marine pollutant  
 14.6 Special precautions for user  
 Special Provisions -

**ADR**

14.1 UN number or ID number UN1202  
 14.2 UN proper shipping name UN1202 HEATING OIL, LIGHT  
 14.3 Transport hazard class(es) 3  
 14.4 Packing group III  
 14.5 Environmental hazard Marine pollutant  
 14.6 Special precautions for user  
 Tunnel restriction code (D/E)

**SECTION 15: Regulatory information**

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

**National regulations**

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorisations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Fuels, diesel - 68334-30-5	75.	-

**Persistent Organic Pollutants**

Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

P5a - FLAMMABLE LIQUIDS  
 P5b - FLAMMABLE LIQUIDS  
 P5c - FLAMMABLE LIQUIDS  
 E2 - Hazardous to the Aquatic Environment in Category Chronic 2

**Named dangerous substances per Seveso Directive (2012/18/EU)**

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**Other Regulations**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). Classification according to Regulation (EC) No. 1272/2008 [CLP].

**15.2. Chemical safety assessment**

**Chemical Safety Report**

Chemical Safety Assessments have been carried out for these substances

**SECTION 16: Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Full text of H-Statements referred to under section 3**

H226 - Flammable liquid and vapour  
 H304 - May be fatal if swallowed and enters airways  
 H315 - Causes skin irritation  
 H332 - Harmful if inhaled  
 H351 - Suspected of causing cancer  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H411 - Toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method

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Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

**Supersedes Date** 17/04/2023

**Revision date** 03/01/2024

**Reason for revision** This is the first issue. (new SDS software has been introduced)

**Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

# Exposure scenario

## Use as a Fuel - Industrial

### Identification

Product name	Fuels, diesel
CAS number	68334-30-5
Version number	2020
Es reference	ES12a

### 1. Title of exposure scenario

Main title	Use as a Fuel - Industrial
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

#### Environment

**Environmental release category** ERC7 Use of functional fluid at industrial site

**SPERC** ESVOC SPERC 7.12a.v1

#### Worker

**Process category**

- PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC16 Use of fuels
- PROC28 Manual maintenance (cleaning and repair) of machinery

### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

#### Amounts used

Fraction of EU tonnage used in region: 0.1  
Regional use tonnage: 3 700 000 tonnes/year  
Fraction of Regional tonnage used locally: 0.4  
Annual site tonnage: 1 500 000 tonnes  
Maximum daily site tonnage: 5 000 tonne/day

#### Frequency and duration of use

Continuous release.  
Emission days: 300 days/year

#### Other given operational conditions affecting environmental exposure

<b>Emission factor - air</b>	Release fraction to air from process (initial release prior to RMM): 0.005
<b>Emission factor - water</b>	Release fraction to wastewater from process (initial release prior to RMM): 1.1E-06
<b>Emission factor - soil</b>	Release fraction to soil from process (initial release prior to RMM): 0

#### Environmental factors not influenced by risk management measures

## Use as a Fuel - Industrial

**Dilution** Local freshwater dilution factor: 10  
Local marine water dilution factor: 100

### Risk management measures

**Good practice** Common practices vary across sites, thus conservative process release estimates used.  
Risk from environmental exposure is driven by freshwater sediment.

**STP details** Estimated substance removal from wastewater via domestic sewage treatment: 94.6%  
Removal efficiency (total): 94.6%  
Maximum allowable site tonnage (M<sub>safe</sub>), based on release following total wastewater treatment removal: 5 200 tonne/day  
Assumed domestic sewage treatment plant flow (m<sup>3</sup>/day): 2000.

### Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

**Air** Treat air emission to provide a typical removal efficiency of 95%.

**Water** Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 94.4. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.

**Soil** Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

### Conditions and measures related to external treatment of waste for disposal

**Waste treatment** Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment. External treatment and disposal of waste should comply with applicable local and/or national regulations.

### Conditions and measures related to external recovery of waste

**Recovery method** This substance is consumed during use and no waste of the substance is generated.

## 2. Conditions of use affecting exposure (Workers - Health 1)

### Product characteristics

**Physical state** Liquid With potential for aerosol generation

**Vapour pressure** Vapour pressure < 0.5 kPa at STP.

**Concentration details** Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

**Setting** Assumes a good basic standard of occupational hygiene is implemented.

**Temperature** Covers use at ambient temperatures. ( unless stated differently )

### Organisational measures to prevent/limit releases, dispersion and exposure



## Use as a Fuel - Industrial

### **Organisational measures**

General measures (skin irritants) Ensure there is no direct skin contact with product. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

General measures (flammability) For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General measures (aspiration hazard) Do not ingest. If swallowed, then seek immediate medical assistance.

General measures applicable to all activities Minimise exposure using measures such as contained and enclosed systems, properly designed and maintained dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure. Wear suitable coveralls to prevent exposure to the skin. Wear suitable gloves tested to EN374. Wear respiratory protection when its use is identified for certain contributing scenarios. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance.

### **Risk management measures**

## Use as a Fuel - Industrial

Bulk transfers

Dedicated facility

(PROC 8b)

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Ensure no splashing occurs during transfer.

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Drum/batch transfers

Dedicated facility

(PROC 8b)

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Ensure no splashing occurs during transfer.

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General exposures (closed systems)

(PROC 1, PROC 2)

Handle substance within a closed system.

Sample via a closed loop or other system to avoid exposure.

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Use as a fuel

(closed systems)

(PROC 16)

Handle substance within a closed system.

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Equipment cleaning and maintenance

(PROC 8a, PROC 28)

Drain down and flush system prior to equipment break-in or maintenance.

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Wear suitable coveralls to prevent exposure to the skin.

Clear spills immediately.

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Storage

(PROC 1, PROC 2)

Store substance within a closed system.

## Use as a Fuel - Industrial

<b>Assessment method</b>	Used Petrorisk model. (Hydrocarbon Block Method) Risk-driving RCR - air compartment driven $RCR(\text{air}) \leq 0.059$ Risk-driving RCR - water compartment driven $RCR(\text{water}) \leq 0.97$
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### 4. Guidance to check compliance with the exposure scenario (Environment 1)

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

### 3. Exposure estimation (Health 1)

<b>Assessment method</b>	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
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### 4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.

# Exposure scenario

## Use as a Fuel - Professional

### Identification

Product name	Fuels, diesel
CAS number	68334-30-5
Version number	2020
Es reference	ES12b

### 1. Title of exposure scenario

Main title	Use as a Fuel - Professional
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

#### Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
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SPERC	ESVOC SPERC 9.12b.v1
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#### Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC16 Use of fuels PROC28 Manual maintenance (cleaning and repair) of machinery
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### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

#### Amounts used

Fraction of EU tonnage used in region: 0.1  
Regional use tonnage: 6 800 000 tonnes/year  
Fraction of Regional tonnage used locally: 0.0005  
Annual site tonnage: 3 400 tonnes  
Maximum daily site tonnage: 9.3 tonne/day

#### Frequency and duration of use

Continuous release.  
Emission days: 365 days/year

#### Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from wide dispersive use (regional only): 0.0001
Emission factor - water	Release fraction to wastewater from wide dispersive use: 0.00001
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.00001

#### Environmental factors not influenced by risk management measures

## Use as a Fuel - Professional

**Dilution** Local freshwater dilution factor: 10  
Local marine water dilution factor: 100

### Risk management measures

**Good practice** Common practices vary across sites, thus conservative process release estimates used.  
Risk from environmental exposure is driven by fresh water.

**STP details** Estimated substance removal from wastewater via domestic sewage treatment: 94.6%  
Removal efficiency (total): 94.6%  
Maximum allowable site tonnage (M<sub>safe</sub>), based on release following total wastewater treatment removal: 1.1E+05 kg/day  
Assumed domestic sewage treatment plant flow (m<sup>3</sup>/day): 2000.

### Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

**Air** Not determined.

**Water** Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency of (%): ≥ 38.8. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required.

**Soil** Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

### Conditions and measures related to external treatment of waste for disposal

**Waste treatment** Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment. External treatment and disposal of waste should comply with applicable local and/or national regulations.

### Conditions and measures related to external recovery of waste

**Recovery method** This substance is consumed during use and no waste of the substance is generated.

## 2. Conditions of use affecting exposure (Workers - Health 1)

### Product characteristics

**Physical state** Liquid With potential for aerosol generation

**Vapour pressure** Vapour pressure < 0.5 kPa at STP.

**Concentration details** Covers percentage substance in the product up to 100% (unless stated differently).

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

**Setting** Assumes a good basic standard of occupational hygiene is implemented.

**Temperature** Covers use at ambient temperatures. ( unless stated differently )

### Organisational measures to prevent/limit releases, dispersion and exposure

## Use as a Fuel - Professional

### **Organisational measures**

General measures (skin irritants) Ensure there is no direct skin contact with product. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clear spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

General measures (flammability) For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General measures (aspiration hazard) Do not ingest. If swallowed, then seek immediate medical assistance.

General measures applicable to all activities Minimise exposure using measures such as contained and enclosed systems, properly designed and maintained dedicated facilities and suitable general/local exhaust ventilation. Drain down and flush system prior to equipment break-in or maintenance. Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure. Wear suitable coveralls to prevent exposure to the skin. Wear suitable gloves tested to EN374. Wear respiratory protection when its use is identified for certain contributing scenarios. Clear spills immediately. Dispose of this material and its container at hazardous or special waste collection point. Ensure control measures are regularly inspected and maintained. Consider the need for risk based health surveillance.

### **Risk management measures**

## Use as a Fuel - Professional

Bulk transfers

Dedicated facility

(PROC 8b)

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Ensure no splashing occurs during transfer.

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Drum/batch transfers

Dedicated facility

(PROC 8b)

Use drum pumps.

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Ensure no splashing occurs during transfer.

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Refuelling

(PROC 8b)

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Ensure no splashing occurs during transfer.

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General exposures (closed systems)

(PROC 1, PROC 2)

Handle substance within a closed system.

Sample via a closed loop or other system to avoid exposure.

.

Use as a fuel

(closed systems)

(PROC 16)

Handle substance within a closed system.

.

Equipment cleaning and maintenance

(PROC 8a, PROC 28)

Drain down and flush system prior to equipment break-in or maintenance.

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

If skin contamination is expected to extend to other parts of the body, then these body parts

## Use as a Fuel - Professional

should also be protected with impervious garments in a manner equivalent to those described for the hands.

For further specification, refer to section 8 of the SDS.

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Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Wear suitable coveralls to prevent exposure to the skin.

Clear spills immediately.

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Storage

(PROC 1, PROC 2)

Store substance within a closed system.

### 3. Exposure estimation (Environment 1)

#### Assessment method

Used Petrorisk model. (Hydrocarbon Block Method)

Risk-driving RCR - air compartment driven  $RCR(\text{air}) \leq 0.022$

Risk-driving RCR - water compartment driven  $RCR(\text{water}) \leq 0.089$

### 4. Guidance to check compliance with the exposure scenario (Environment 1)

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

### 3. Exposure estimation (Health 1)

#### Assessment method

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.



# Exposure scenario

## Use as a Fuel - Consumer

### Identification

Product name	Fuels, diesel
CAS number	68334-30-5
Version number	2020
Es reference	ES12c

### 1. Title of exposure scenario

Main title	Use as a Fuel - Consumer
Process scope	Covers consumer uses in liquid fuels.
Product category	PC13 Fuels.
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.12c.v1
<u>Non-industrial</u>	
Product sub-category	PC13_1 Liquid: automotive refuelling CONCAWE SCED 13.3.a  PC13_4 Liquid: Garden equipment - Refuelling CONCAWE SCED 13.4.a  PC13_6 Liquid: home space heater fuel CONCAWE SCED 13.5.a

### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

#### Product characteristics

Substance is complex UVCB. Predominantly hydrophobic.

#### Amounts used

Fraction of EU tonnage used in region: 0.1  
Regional use tonnage: 19 000 000 tonnes/year  
Fraction of Regional tonnage used locally: 0.0005  
Annual site tonnage: 9 500 tonnes  
Maximum daily site tonnage: 26 tonne/day

#### Frequency and duration of use

Continuous release.  
Emission days: 365 days/year

#### Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from wide dispersive use (regional only): 0.0001
Emission factor - water	Release fraction to wastewater from wide dispersive use: 0.00001
Emission factor - soil	Release fraction to soil from wide dispersive use (regional only): 0.00001

#### Environmental factors not influenced by risk management measures

## Use as a Fuel - Consumer

**Dilution** Local freshwater dilution factor: 10  
Local marine water dilution factor: 100

### Risk management measures

**STP details** Not applicable as there is no release to wastewater.  
Estimated substance removal from wastewater via domestic sewage treatment: 94.6%  
Maximum allowable site tonnage (M<sub>safe</sub>), based on release following total wastewater treatment removal: 2.3E+05 kg/day  
Assumed domestic sewage treatment plant flow (m<sup>3</sup>/day): 2000.

### Conditions and measures related to external treatment of waste for disposal

**Waste treatment** Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment. External treatment and disposal of waste should comply with applicable local and/or national regulations.

### Conditions and measures related to external recovery of waste

**Recovery method** This substance is consumed during use and no waste of the substance is generated.

## 2. Conditions of use affecting exposure (Non-industrial - Health 1)

### Product characteristics

**Physical state** Liquid

**Concentration details** Covers concentrations up to 100 %.

### Amounts used

PC13\_1 Liquid: automotive refuelling  
For each use event, covers use amounts up to 44 kg.  
.  
PC13\_4 Liquid: Garden equipment - Refuelling  
For each use event, covers use amounts up to 750 g.  
.  
PC13\_6 Liquid: home space heater fuel  
For each use event, covers use amounts up to 3.32 kg.

### Frequency and duration of use

Covers use up to 1 time(s)/day.  
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PC13\_1 Liquid: automotive refuelling  
Covers exposure up to 0.05 hours per event.  
.  
PC13\_4 Liquid: Garden equipment - Refuelling  
PC13\_6 Liquid: home space heater fuel  
Covers exposure up to 0.033 hours per event.

### Human factors not influenced by risk management

**Potentially exposed body parts** PC13\_1 Liquid: automotive refuelling , PC13\_6 Liquid: home space heater fuel :  
Assumes that potential dermal contact is limited to palm of one hand.  
  
PC13\_4 Liquid: Garden equipment - Refuelling :  
Assumes that potential dermal contact is limited to inside hands/one hand/palm of hands.

### Other given operational conditions affecting Non-industrial exposure

**Setting** PC13\_1 Liquid: automotive refuelling : Covers outdoor use.

### Other given operational conditions affecting Non-industrial exposure

## Use as a Fuel - Consumer

General measures (skin irritants) Ensure there is no direct skin contact with product. Wash off any skin contamination immediately.

General measures (flammability) For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.

General measures (aspiration hazard) Do not ingest. If swallowed, then seek immediate medical assistance.

### 3. Exposure estimation (Environment 1)

**Assessment method** Used Petrorisk model. (Hydrocarbon Block Method)

Risk-driving RCR - air compartment driven  $RCR(\text{air}) \leq 0.045$   
Risk-driving RCR - water compartment driven  $RCR(\text{water}) \leq 0.11$

### 4. Guidance to check compliance with the exposure scenario (Environment 1)

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

### 3. Exposure estimation (Health 1)

**Assessment method** The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Available hazard data do not enable the derivation of a DNEL for aspiration effects. Risk Management Measures are based on qualitative risk characterisation.