SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Supercedes date	Revision date	Revision Number
21/01/2024	21/03/2024	1.01
		Country-Language: FIN-EN

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

1.1. Product identifier

Product Name Neste Renewable Non-road diesel; Neste MY Renewable Non-road Diesel; Neste MY Renewable Diesel Marine

Product Code(s) 18181, 160115, 160116, 160484

Other means of identification 160110, 160112

Unique Formula Identifier (UFI) H188-WD2S-KP1T-P1F4

Pure substance/mixture Mixture

Contains Renewable hydrocarbons (diesel type fraction)

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

Recommended use Formulation & (re)packing of substances and mixtures (ES 02)
Distribution of substance (ES 04)
Use as a fuel (ES 06, 14, 23)

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 :

Emergency Telephone - §45 - (EC)1272/2008	
Europe	**112**
Finland	+358 800 147 111, +358 9 471 977, Poison Information Centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aspiration hazard	Category 1 - (H304)

2.2. Label elements

Contains Renewable hydrocarbons (diesel type fraction)

Signal word
Danger

Hazard statements
H304 - May be fatal if swallowed and enters airways
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements - EU (§28, 1272/2008)
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P331 - Do NOT induce vomiting
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

Combustible liquid. 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)
Renewable hydrocarbons (diesel type fraction) -	~100	01-2119450077-42	700-571-2	Asp. Tox. 1 (H304)	-	-	-

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

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

Additional information
Mixture of renewable raw material fuel and additives. Contains middle distillate-range iso- and n-paraffinic hydrocarbons. Total

aromatics at maximum 1,0 Weight %.
Renewable hydrocarbons (diesel type fraction): REACH Registration No 01-2119450077-42-0000 / -0001 / -0002.
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 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 direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen.

Eye contact 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. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Remove contaminated clothing and shoes. Wash skin with soap and water. Get medical attention if irritation develops and persists.

Ingestion 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. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention. Delayed pulmonary edema may occur.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required.

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

Symptoms Repeated exposure may cause skin dryness or cracking. Spray/mists may cause respiratory tract irritation. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Combustible liquid. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Containers may explode when heated.

Hazardous combustion products	Carbon dioxide (CO2). Carbon monoxide.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment as required. Take precautionary measures against static discharge. Do not touch or walk through spilled material.
For emergency responders	Prevent unauthorized access. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges.

6.2. Environmental precautions

Environmental precautions	Avoid release to the environment. Stop leak if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained. Risk of soil and ground water contamination.

6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Stop leak if you can do it without risk. Do not touch or walk through spilled material.
Methods for cleaning up	Immediately start clean-up of the liquid and contaminated soil. Take precautionary measures against static discharge. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Pay attention to the fire and health hazards caused by the product.
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	Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use only outdoors or in a well-ventilated area. Ensure adequate ventilation. Do not breathe mist/vapours/spray. Avoid contact with eyes and skin. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Flammable liquid storage. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep in properly labelled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store away from other materials. Keep out of the reach of children.

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/m³ (IFV).

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Renewable hydrocarbons (diesel type fraction) -	-	42 mg/kg bw/day [4] [6]	147 mg/m³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Renewable hydrocarbons (diesel type fraction) -	-	18 mg/kg bw/day [4] [6]	94 mg/m³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Provide adequate ventilation. Use personal protection equipment. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear protective gloves. It is recommended that gloves are made of the following material:. Nitrile rubber. Neoprene gloves. Polyvinyl chloride (PVC). Wear suitable gloves tested to EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Change protective gloves regularly.
Skin and body protection	Protective clothing when needed. Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge:. Combination filter, type A2/P2. Filter must be changed often enough. Gas and combination filter cartridges should comply with European Standard EN14387. At high concentrations a breathing apparatus must be used (self-contained or fresh air hose breathing apparatus).
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Environmental exposure controls	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

Physical state	Liquid
Colour	red
Odour	Mild.
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	180 - 320 °C	(EN ISO 3405)
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	> 61 °C	(EN ISO 2719, EC A9)
Autoignition temperature	204 °C	(EC A15)
Decomposition temperature		None known
pH	No data available	-
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	2.6 mm²/s	@ 40 °C
Dynamic viscosity	≤ 5 mPa s	@ 20 °C
Water solubility	Insoluble in water ~ 0,075 mg/l water	@ 25 °C (Calculated)
Solubility(ies)	Soluble in the following materials: Methanol, Hydrocarbons.	None known
Partition coefficient	log Kow: > 6,5	(EC A8)
Vapour pressure	0,087 kPa	@ 25 °C (EC A4)
Relative density	0,77 - 0,79	@ 15/4°C (EN ISO 12185, EC A3)
Bulk density	No data available	

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

9.2. Other information

Pour Point	< -20 @ 1013 hPa (BS4633, EC A1)

9.2.1. Information with regards to physical hazard classes

Not applicable

Explosives	No
Explosive properties	Not considered to be explosive
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 Keep away from heat, sparks and open flame.

10.5. Incompatible materials

Incompatible materials Oxidising agent.

10.6. Hazardous decomposition products

Hazardous decomposition products None under normal use conditions.

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 Based on available data, the classification criteria are not met

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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

Skin corrosion/irritation Based on available data, the classification criteria are not met. (EC B4). Repeated exposure may cause skin dryness or cracking. The product irritates mucous membranes and may cause abdominal discomfort if swallowed. May cause respiratory irritation.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met. (EC B5).

Respiratory or skin sensitisation Based on available data, the classification criteria are not met. (EC B6).

Germ cell mutagenicity Based on available data, the classification criteria are not met. (EC B10, B13/14, B17).

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met. (OECD 416).

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met. (OECD 408).

Aspiration hazard 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 Based on available data, the classification criteria are not met.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Renewable hydrocarbons (diesel type fraction)	OECD 201, 72 hours, Algae, WAF: EL50: > 100 mg/l	OECD 203, 96 h, WAF LL_{50}: > 1000 mg/l	OECD 209, 30-180 min, Micro-organisms (wastewater sludge): EC_{50}:> 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_{50}: 1200 mg/kg

12.2. Persistence and degradability

Persistence and degradability Rapidly biodegradable. (OECD 301B).

Renewable hydrocarbons (diesel type fraction) (-)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)			Rapidly biodegradable

12.3. Bioaccumulative potential

Bioaccumulation May bioaccumulate.

12.4. Mobility in soil

Mobility in soil Evaporates slowly. The product has poor water-solubility. The product contains substances which are bound to particulate matter and are retained in soil. Log Koc > 5.6 (EC C19).

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
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Product residues retained in emptied containers can be hazardous. Waste packaging should be collected for reuse or recycling.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazard	No
14.6 Special precautions for user	.
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	. Bulk (MARPOL 73/78, Annex I): Energy-rich fuels: 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

RID

14.1 UN number or ID number	1202
14.2 UN proper shipping name	Diesel fuel
14.3 Transport hazard class(es)	3
14.4 Packing group	III
Description	UN1202, Diesel fuel, 3, III
14.5 Environmental hazard	No
14.6 Special precautions for user	.
Classification code	30

ADR

14.1 UN number or ID number	1202
14.2 UN proper shipping name	Diesel fuel
14.3 Transport hazard class(es)	3
14.4 Packing group	III
Description	UN1202, Diesel fuel, 3, III, (D/E)
14.5 Environmental hazard	No

14.6 Special precautions for user

Classification code	30
Tunnel restriction code	(D/E)

.

ADN

UN number or ID number	1202
UN proper shipping name	Diesel fuel
Transport hazard class(es)	3
Subsidiary hazard class	F (floater)
Packing group	III

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 does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

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].
TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not Listed
IECSC	-
AIIC	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
IECSC - China Inventory of Existing Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance

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
H304 - May be fatal if swallowed and enters airways

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
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

Issuing Date 21/03/2024

Supercedes date 21/01/2024

Revision date 21/03/2024

Reason for revision Product Name

Further information Key literature references and sources for data Regulations, databases, literature, own research. Chemical Safety Report Renewable hydrocarbons (diesel type fraction), 2017.

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
Formulation & (re)packing - Industrial

Identification

Product name	Renewable hydrocarbons (diesel type fraction)
EU REACH registration number	01-2119450077-42-XXXX
Version number	2017
Es reference	02

1. Title of exposure scenario

Main title	Formulation & (re)packing - Industrial
Process scope	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC2 Formulation into mixture
SPERC	ESVOC SPERC 2.2.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 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC5 Mixing or blending in batch processes 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 PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.

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

Amounts used

Fraction of EU tonnage used in region: 1
Daily amount per site: ≤ 100 t
Annual amount per site: ≤ 1 500 000 t

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	0,25%

Formulation & (re)packing - Industrial

Emission factor - water	0,005%
Emission factor - soil	0.01%

Environmental factors not influenced by risk management measures

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

Risk management measures

STP type	Aerobic biological treatment
STP details	Assumed domestic sewage treatment plant flow (m³/day): 2000.

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste in accordance with environmental legislation.

Conditions and measures related to external recovery of waste

Recovery method	All waste product is assumed to be collected and returned for re-processing or use as a fuel.

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

Product characteristics

Physical state	Liquid
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).

Human factors not influenced by risk management

Potentially exposed body parts	PROC 1, PROC 3, PROC 15: Covers skin contact area up to 240 cm². Palm of one hand. PROC 2, PROC 5, PROC 9: Covers skin contact area up to 480 cm². Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm². Both hands.

Other given operational conditions affecting workers exposure

Setting	Indoor use.
Temperature	≤ 40 °C
Ventilation rate	1 - 3 air changes per hour Unless otherwise stated. Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Formulation & (re)packing - Industrial

Mixing operations
(PROC 3)
No specific measures identified.

Batch processes at elevated temperatures
(PROC 3)
No specific measures identified.

Process sampling
(PROC 3)
Wear suitable gloves tested to EN374.

Laboratory activities
(PROC 15)
Provide adequate general and local exhaust ventilation.
Wear suitable gloves tested to EN374.
Recommendation:
Handle in a fume cupboard or under extract ventilation.

Bulk transfers
(PROC 8b)
No specific measures identified.

Mixing operations
(open systems)
With potential for aerosol generation
(PROC 5)
Recommendation:
Wear suitable gloves tested to EN374.

Transfer from/pouring from containers
Manual
(PROC 8a)
Wear suitable gloves tested to EN374.

Drum/batch transfers
(PROC 8b)
No specific measures identified.

Drum and small package filling
(PROC 9)
Provide adequate general and local exhaust ventilation.
Recommendation:
Fill containers/cans at dedicated fill points supplied with local extract ventilation.

Equipment cleaning and maintenance
(PROC 8a)
Provide adequate general and local exhaust ventilation.
Recommendation:
Drain down and flush system prior to equipment break-in or maintenance.
Wear suitable gloves tested to EN374.

Storage
(PROC 1, PROC 2)
No specific measures identified.

Formulation & (re)packing - Industrial

3. Exposure estimation (Environment 1)

Assessment method	Used Petrorisk model.

3. Exposure estimation (Health 1)

Assessment method	Used CHESAR model.

Exposure scenario
Distribution of Substance - Industrial

Identification

Product name	Renewable hydrocarbons (diesel type fraction)
EU REACH registration number	01-2119450077-42-XXXX
Version number	2017
Es reference	04

1. Title of exposure scenario

Main title	Distribution of Substance - Industrial
Process scope	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC7 Use of functional fluid at industrial site
SPERC	ESVOC SPERC 1.1b.v1

Worker

Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition 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 PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.

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

Amounts used

Fraction of EU tonnage used in region: 1
Daily amount per site: ≤ 5000 t
Annual amount per site: ≤ 1 500 000 t

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	0,001%
Emission factor - water	4E-7%.
Emission factor - soil	0,001%

Environmental factors not influenced by risk management measures

Distribution of Substance - Industrial

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

Risk management measures

STP type	Aerobic biological treatment
STP details	Assumed domestic sewage treatment plant flow (m³/day): 2000.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste in accordance with environmental legislation.

Conditions and measures related to external recovery of waste

Recovery method	All waste product is assumed to be collected and returned for re-processing or use as a fuel.

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

Product characteristics

Physical state	Liquid
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).

Human factors not influenced by risk management

Potentially exposed body parts	PROC 3, PROC 15: Covers skin contact area up to 240 cm². Palm of one hand. PROC 2, PROC 9: Covers skin contact area up to 480 cm². Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm². Both hands.

Other given operational conditions affecting workers exposure

Setting	Indoor use.
Temperature	≤ 40°C
Ventilation rate	1 -3 air changes per hour Unless otherwise stated. Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Distribution of Substance - Industrial

General exposures (closed systems)
With occasional controlled exposure
(PROC 3)
No specific measures identified.

Process sampling
(PROC 3)
Wear suitable gloves tested to EN374.

Laboratory activities
(PROC 15)
Provide adequate general and local exhaust ventilation.
Wear suitable gloves tested to EN374.
Recommendation:
Handle in a fume cupboard or under extract ventilation.

Bulk transfers
Road tanker/rail car loading.
(closed systems)
(PROC 8b)
Recommendation:
Use vapour recovery units when necessary.
Wear suitable gloves tested to EN374.

Bulk transfers
Marine vessel/barge (un)loading.
(closed systems)
(PROC 8b)
Recommendation:
Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance
(PROC 8a)
Provide adequate general and local exhaust ventilation.
Recommendation:
Drain down and flush system prior to equipment break-in or maintenance.
Wear suitable gloves tested to EN374.

Storage
With occasional controlled exposure
(PROC 2)
No specific measures identified.

Drum and small package filling
(PROC 9)
Recommendation:
Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model.

3. Exposure estimation (Health 1)

Assessment method Used CHESAR model.

Exposure scenario
Use as a fuel - Industrial

Identification

Product name	Renewable hydrocarbons (diesel type fraction)
EU REACH registration number	01-2119450077-42-XXXX
Version number	2017
Es reference	06

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.
Main sector	SU3 Industrial uses

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 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises 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 PROC15 Use as laboratory reagent. PROC16 Use of fuels

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

Amounts used

Fraction of EU tonnage used in region: 1
Daily amount per site: ≤ 5000 t
Annual amount per site: ≤ 10 000 t

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	0.025%
Emission factor - water	0,001%
Emission factor - soil	0%

Use as a fuel - Industrial

Environmental factors not influenced by risk management measures

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

Risk management measures

STP type	Aerobic biological treatment
STP details	Assumed domestic sewage treatment plant flow (m³/day): 2000.

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste in accordance with environmental legislation.

Conditions and measures related to external recovery of waste

Recovery method	Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

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

Product characteristics

Physical state	Liquid
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).

Human factors not influenced by risk management

Potentially exposed body parts	PROC 1, PROC 3, PROC 15, PROC 16: Covers skin contact area up to 240 cm². Palm of one hand. PROC 2, PROC 4: Covers skin contact area up to 480 cm². Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm². Both hands.

Other given operational conditions affecting workers exposure

Setting	Indoor use.
Temperature	≤ 40 °C
Ventilation rate	1 - 3 air changes per hour Unless otherwise stated. Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use as a fuel - Industrial

Bulk transfers
(PROC 4)
Recommendation:
Wear suitable gloves tested to EN374.

Drum/batch transfers
(PROC 8b)
Provide adequate general and local exhaust ventilation.
Recommendation:
Use drum pumps or carefully pour from container.
Wear suitable gloves tested to EN374.

Bulk transfers
(PROC 8b)
Recommendation:
Use drum pumps or carefully pour from container.
Wear suitable gloves tested to EN374.

General exposures (closed systems)
Continuous process
(PROC 1)
No specific measures identified.

General exposures (closed systems)
Continuous process
With sample collection
(PROC 2)
Recommendation:
Ensure material transfers are under containment or extract ventilation.

General exposures (closed systems)
Batch process
(PROC 3)
Recommendation:
Ensure material transfers are under containment or extract ventilation.

General exposures (open systems)
(PROC 16)
Recommendation:
Ensure material transfers are under containment or extract ventilation.

Process sampling
(PROC 3)
Recommendation:
Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance
(PROC 8a)
Provide adequate general and local exhaust ventilation.
Recommendation:
Drain down and flush system prior to equipment break-in or maintenance.
Wear suitable gloves tested to EN374.

Vessel and container cleaning
(PROC 8a)

Use as a fuel - Industrial

Provide adequate general and local exhaust ventilation.
Recommendation:
Drain down and flush system prior to equipment break-in or maintenance.
Provide enhanced general ventilation by mechanical means.
If above technical/organisational control measures are not feasible, then adopt following PPE:
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
Wear suitable gloves tested to EN374.
Wear suitable coveralls to prevent exposure to the skin.

Storage
(PROC 1, PROC 2)
No specific measures identified.

Refuelling
(PROC 8b)
Recommendation:
Use drum pumps or carefully pour from container.
Use vapour recovery units when necessary.
Wear suitable gloves tested to EN374.

Laboratory activities
(PROC 15)
Recommendation:
Handle in a fume cupboard or under extract ventilation.
Wear suitable gloves (tested to EN374), coverall and eye protection.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model.

3. Exposure estimation (Health 1)

Assessment method Used CHESAR model.

Exposure scenario
Use as a fuel - Professional

Identification

Product name	Renewable hydrocarbons (diesel type fraction)
EU REACH registration number	01-2119450077-42-XXXX
Version number	2017
Es reference	14

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.
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.12b.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 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition 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

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

Amounts used

Fraction of EU tonnage used in region: 0.1
Daily amount per site: ≤ 160 kg

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	0,01 %
Emission factor - water	0,001 %
Emission factor - soil	0,001 %

Environmental factors not influenced by risk management measures

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

Use as a fuel - Professional

Risk management measures

STP type	Aerobic biological treatment
STP details	Assumed domestic sewage treatment plant flow (m³/day): 2000.

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste in accordance with environmental legislation.

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

Product characteristics

Physical state	Liquid
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).

Human factors not influenced by risk management

Potentially exposed body parts	PROC 1, PROC 3, PROC 16: Covers skin contact area up to 240 cm². Palm of one hand. PROC 2: Covers skin contact area up to 480 cm². Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm². Both hands.

Other given operational conditions affecting workers exposure

Setting	Indoor use.
Temperature	≤ 40 °C
Ventilation rate	1 - 3 air changes per hour Unless otherwise stated.

Risk management measures

Use as a fuel - Professional

Bulk transfers
Heating oil and diesel deliveries
(PROC 8b)
Provide adequate general and local exhaust ventilation.
Recommendation:
Handle substance within a closed system.
Wear suitable gloves tested to EN374.
.
Drum/batch transfers
(PROC 8b)
Provide adequate general and local exhaust ventilation.
Recommendation:
Use drum pumps or carefully pour from container.
Wear suitable gloves tested to EN374.
.
Refuelling
(PROC 8b)
Provide adequate general and local exhaust ventilation.
Recommendation:
Use drum pumps or carefully pour from container.
Wear suitable gloves tested to EN374.
.
Dipping, immersion and pouring
(PROC 8b)
Wear suitable gloves tested to EN374.
.
General exposures
(PROC 1, PROC 2, PROC 3, PROC 16)
No specific measures identified.
.
Equipment cleaning and maintenance
(PROC 8a)
Provide adequate general and local exhaust ventilation.
Recommendation:
Drain down and flush system prior to equipment break-in or maintenance.
Wear suitable gloves tested to EN374.
.
Vessel and container cleaning
(PROC 8a)
Provide adequate general and local exhaust ventilation.
Recommendation:
Drain down and flush system prior to equipment break-in or maintenance.
Wear suitable gloves tested to EN374.
.
Storage
(PROC 1, PROC 2)
No specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model.

3. Exposure estimation (Health 1)

Assessment method Used CHESAR model.

Exposure scenario
Use as a fuel - Consumer

Identification

Product name	Renewable hydrocarbons (diesel type fraction)
EU REACH registration number	01-2119450077-42-XXXX
Version number	2017
Es reference	23

1. Title of exposure scenario

Main title	Use as a fuel - Consumer
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.
Product category	PC13 Fuels.
Main sector	SU21 Consumer uses

Environment

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

Non-industrial

Product sub-category	PC13_1 Liquid: automotive refuelling PC13_2 Liquid: scooter refuelling PC13_3 Liquid: garden equipment - use PC13_4 Liquid: Garden equipment - Refuelling PC13_5 Liquid: lamp oil PC13_6 Liquid: home space heater fuel PC13_n Liquid: refuelling of boats

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

Amounts used

Fraction of EU tonnage used in region: 0,1
Daily amount per site: ≤ 550 kg

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	0,01 %
Emission factor - water	0,001 %
Emission factor - soil	0,001 %

Environmental factors not influenced by risk management measures

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

Risk management measures

Use as a fuel - Consumer

Technical measures	Indoor/outdoor use.
STP type	Aerobic biological treatment
STP details	Assumed domestic sewage treatment plant flow (m³/day): 2000.

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste in accordance with environmental legislation.

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

Product characteristics

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

Amounts used

PC13_1 Liquid: automotive refuelling
For each use event, covers use amounts up to 38,6 kg.
PC13_2 Liquid: scooter refuelling
For each use event, covers use amounts up to 7,5 kg.
PC13_3 Liquid: garden equipment - use
For each use event, covers use amounts up to 772 g.
PC13_4 Liquid: Garden equipment - Refuelling
For each use event, covers use amounts up to 772 g.
PC13_5 Liquid: lamp oil
For each use event, covers use amounts up to 100 g.
PC13_6 Liquid: home space heater fuel
For each use event, covers use amounts up to 3320 g.
PC13_n Liquid: refuelling of boats
For each use event, covers use amounts up to 156,0 kg.

Frequency and duration of use

Use as a fuel - Consumer

Covers use up to 1 time(s)/day.
.
PC13_1 Liquid: automotive refuelling
Covers exposure up to 0,05 hours per event.
(occasional use over a year)
.
PC13_2 Liquid: scooter refuelling
Covers exposure up to 0,02 hours per event.
(frequent use over a year)
.
PC13_3 Liquid: garden equipment - use
Covers exposure up to 2,00 hours per event.
(occasional use over a year)
.
PC13_4 Liquid: Garden equipment - Refuelling
Covers exposure up to 0,03 hours per event.
(occasional use over a year)
.
PC13_5 Liquid: lamp oil
Covers exposure up to 0,01 hours per event.
(occasional use over a year)
.
PC13_6 Liquid: home space heater fuel
Covers exposure up to 0,1 hours per event.
(frequent use over a year)
.
PC13_n Liquid: refuelling of boats
Covers exposure up to 0,25 hours per event.
(infrequent use over a year)

Human factors not influenced by risk management

Potentially exposed body parts	Palm of one hand. Unless otherwise stated. PC13_4 Liquid: Garden equipment - Refuelling : Palm of both hands.

Other given operational conditions affecting Non-industrial exposure

Setting	Outdoor use. Unless otherwise stated. PC13_5 Liquid: lamp oil : Indoor/outdoor use.

Other given operational conditions affecting Non-industrial exposure

Avoid contact with skin, eyes and clothing. Wash promptly if skin becomes contaminated. All handling should only take place in well-ventilated areas. Do not ingest. If swallowed, then seek immediate medical assistance.

3. Exposure estimation (Environment 1)

Assessment method Used Petrorisk model.

3. Exposure estimation (Health 1)

Assessment method Used CHESAR model.