

Safety Data Sheet Neste My Renewable diesel

Supersedes date: 26/07/2022 Revision date: 02/02/2023

SECTION 1: Identification of the	ne substance/mixture and of the company/undertaking
1.1. Product identifier	
Product name	Neste Renewable Diesel; Neste Renewable Diesel 100 %; Neste MY Renewable Diesel
Chemical name	Renewable hydrocarbons (diesel type fraction)
Product number	ID 13898
UFI	UFI: SDGM-514C-9915-FWKJ
EU REACH registration number	01-2119450077-42-0000
EU REACH registration notes	01-2119450077-42-0000 / -0001 / -0002
1.2. Relevant identified uses o	f the substance or mixture and uses advised against
Identified uses	Formulation & (re)packing of substances and mixtures (ES 02) Distribution of substance (ES 04) Use as an intermediate (ES 05) Use as a fuel (ES 06, 14, 23)
1.3. Details of the supplier of the	ne safety data sheet
Supplier	Biofuel Express A/S Alsvej 21, 8940 Randers SV, Denmark Tel. +45 70 26 41 22 mail@biofuel-express.com
1.4. Emergency telephone nur	nber
Emergency telephone	+61 2 9186 1132, Chemwatch: International Emergency Response Phone Number
National emergency telephone number	+358 800 147 111, +358 9 471 977, Poison Information Centre
SECTION 2: Hazards identifica	ation
2.1. Classification of the substa	ance or mixture
Classification (SI 2019 No. 720	±
Physical hazards	Not Classified
Health hazards	Asp. Tox. 1 - H304
Environmental hazards	Not Classified
2.2. Label elements	
Hazard pictograms	

Signal word

Danger

ca. 100%

Neste Renewable Diesel; Neste Renewable Diesel 100 %; Neste MY Renewable Diesel

Hazard statements	H304 May be fatal if swallowed and enters airways.
Precautionary statements	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Contains	Renewable hydrocarbons (diesel type fraction)
2.3. Other hazards	
Other hazards	Combustible liquid. Risk of soil and ground water contamination.
	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

3.2. Mixtures

Renewable hydrocarbons (diesel type fraction)

CAS number: ----

Classification

Asp. Tox. 1 - H304

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Other informationMixture 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 Nr: 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

Inhalation	Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature. If spray/mist has been inhaled, proceed as follows. Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms are severe or persist.
Ingestion	Do not induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.
4.2. Most important symptoms	s and effects, both acute and delayed
General information	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 immedia	ate medical attention and special treatment needed
Notes for the doctor	Treat symptomatically.

SECTION 5: Firefighting measures		
5.1. Extinguishing media		
Suitable extinguishing media	Water spray, foam, dry powder or carbon dioxide.	
Unsuitable extinguishing media	Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters	
5.2. Special hazards arising from the substance or mixture		
Specific hazards	Combustible liquid. Containers can burst violently or explode when heated, due to excessive pressure build-up.	
Hazardous combustion products	Carbon dioxide (CO2). Carbon monoxide (CO).	
5.3. Advice for firefighters		
Protective actions during firefighting	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.	
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.	
SECTION 6: Accidental release	e measures	
6.1. Personal precautions, pro	tective equipment and emergency procedures	
Personal precautions	Wear adequate protective equipment at all operations.	
For emergency responders	Prevent unauthorized access. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge.	
6.2. Environmental precaution	<u>8</u>	
Environmental precautions	Avoid release to the environment. Stop leak if safe to do so. Avoid the spillage or runoff entering drains, sewers or watercourses. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air). Risk of soil and ground water contamination.	
6.3. Methods and material for	containment and cleaning up	
Methods for cleaning up	Immediately start clean-up of the liquid and contaminated soil. Contain spillage with sand, earth or other suitable non-combustible material. Pay attention to the fire and health hazards caused by the product.	
6.4. Reference to other section		
Reference to other sections	For personal protection, see Section 8.	
SECTION 7: Handling and sto	rage	
7.1. Precautions for safe hand	ling	
Usage precautions	Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Use only outdoors or in a well-ventilated area. Avoid inhalation of vapours and contact with skin and eyes. Use personal protective equipment and/or local ventilation when needed. Do not eat, drink or smoke when using this product. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).	
7.2. Conditions for safe storage, including any incompatibilities		

Storage precautionsFlammable liquid storage. Store in accordance with local regulations. Store in a demarcated
bunded area to prevent release to drains and/or watercourses. Only store in correctly labelled
containers. Use containers made of the following materials: Carbon steel. Stainless steel.

7.3. Specific end use(s)	
Specific end use(s)	Not known.
SECTION 8: Exposure control	ols/Personal protection
8.1. Control parameters	
Ingredient comments	The individual limit values can be applied for the hydrocarbons. Diesel fuel as total hydrocarbons; ACGIH TLV®-TWA (8h) 100 mg/m3 (IFV).
PNEC	Not available.
	Renewable hydrocarbons (diesel type fraction)
DNEL	Workers - Inhalation; Long term systemic effects: 147 mg/m³ Workers - Dermal; Long term systemic effects: 42 mg/kg/day Consumer - Inhalation; Long term systemic effects: 94 mg/m³ Consumer - Dermal; Long term systemic effects: 18 mg/kg/day
8.2. Exposure controls	
Appropriate engineering controls	Provide adequate ventilation. Use personal protective equipment and/or local ventilation when needed. Handle in accordance with good industrial hygiene and safety practice. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).
Eye/face protection	Spectacles.
Hand protection	Wear protective gloves. It is recommended that gloves are made of the following material: Nitrile rubber. Neoprene. Polyvinyl chloride (PVC). The breakthrough time for any glove material may be different for different glove manufacturers. Protective gloves according to standard EN 374. Change protective gloves regularly.
Other 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 suitable for intended use should be used. At high concentrations a breathing apparatus must be used (self-contained or fresh air hose breathing apparatus).
Environmental exposure controls	Store in a demarcated bunded area to prevent release to drains and/or watercourses.
SECTION 9: Physical and ch	emical properties
9.1. Information on basic phy	visical and chemical properties
Appearance	Liquid.
Colour	Clear.
Odour	Mild.
Odour threshold	-
рН	-
Melting point	Pour point < -20°C @ 1013 hPa (BS4633, EC A1)

Initial boiling point and range 180-320°C (EN ISO 3405)

Flash point> 61°C (EN ISO 2719, EC A9)

Upper/lower flammability or explosive limits	-
Vapour pressure	0,087 kPa @ 25°C (EC A4)
Vapour density	-
Relative density	0,77 - 0,79 @ 15/4°C (EN ISO 12185, EC A3)
Solubility(ies)	Insoluble in water. ~ 0,075 mg/l water @ 25° C (calculated) Soluble in the following materials: Methanol. Hydrocarbons.
Partition coefficient	log Kow: > 6,5 (EC A8)
Auto-ignition temperature	204°C (EC A15)
Decomposition Temperature	-
Viscosity	Kinematic viscosity 4.0 mm2/s @ 20°C 2.6 mm2/s @ 40°C (OECD 114) Dynamic viscosity ≤ 5 mPa s @ 20°C
Explosive properties	Not considered to be explosive. (EC A14)
Oxidising properties	Does not meet the criteria for classification as oxidising.
9.2. Other information	
Other information	Not known.
SECTION 10: Stability and rea	activity
10.1. Reactivity	
Reactivity	There are no known reactivity hazards associated with this product.
10.2. Chemical stability	
<u>roizi erioinida diabinty</u>	
Stability	Stable at normal ambient temperatures and when used as recommended.
Stability	
Stability 10.3. Possibility of hazardous Possibility of hazardous	reactions
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions	reactions
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions 10.4. Conditions to avoid	reactions No potentially hazardous reactions known.
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions 10.4. Conditions to avoid Conditions to avoid	reactions No potentially hazardous reactions known.
Stability <u>10.3. Possibility of hazardous</u> Possibility of hazardous reactions <u>10.4. Conditions to avoid</u> Conditions to avoid <u>10.5. Incompatible materials</u>	reactions No potentially hazardous reactions known. Keep away from heat, sparks and open flame. Oxidising agents.
Stability <u>10.3. Possibility of hazardous</u> Possibility of hazardous reactions <u>10.4. Conditions to avoid</u> Conditions to avoid <u>10.5. Incompatible materials</u> Materials to avoid	reactions No potentially hazardous reactions known. Keep away from heat, sparks and open flame. Oxidising agents.
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions 10.4. Conditions to avoid Conditions to avoid 10.5. Incompatible materials Materials to avoid 10.6. Hazardous decomposition	reactions No potentially hazardous reactions known. Keep away from heat, sparks and open flame. Oxidising agents. on products Does not decompose when used and stored as recommended.
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions 10.4. Conditions to avoid Conditions to avoid 10.5. Incompatible materials Materials to avoid 10.6. Hazardous decomposition products	reactions No potentially hazardous reactions known. Keep away from heat, sparks and open flame. Oxidising agents. on products Does not decompose when used and stored as recommended.
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions 10.4. Conditions to avoid Conditions to avoid 10.5. Incompatible materials Materials to avoid 10.6. Hazardous decomposition products SECTION 11: Toxicological in	reactions No potentially hazardous reactions known. Keep away from heat, sparks and open flame. Oxidising agents. on products Does not decompose when used and stored as recommended.
Stability 10.3. Possibility of hazardous Possibility of hazardous reactions 10.4. Conditions to avoid Conditions to avoid 10.5. Incompatible materials Materials to avoid 10.6. Hazardous decomposition products SECTION 11: Toxicological in 11.1. Information on toxicolog	reactions No potentially hazardous reactions known. Keep away from heat, sparks and open flame. Oxidising agents. on products Does not decompose when used and stored as recommended. formation ical effects

Serious eye damage	e/irritation Based	on available data the classification criteria are not met. (EC B5)
Skin sensitisation		
Skin sensitisation	Based	on available data the classification criteria are not met. (EC B6)
Germ cell mutageni	city	
Genotoxicity - in vitr	o Based	on available data the classification criteria are not met. (EC B10, B13/14 & B17).
Carcinogenicity		
Carcinogenicity	Based	on available data the classification criteria are not met.
Reproductive toxicit	<u>y</u>	
Reproductive toxicit	y - fertility Based	on available data the classification criteria are not met. (OECD 416)
Specific target orga	n toxicity - single ex	kposure .
STOT - single expos	sure Not cla	ssified as a specific target organ toxicant after a single exposure.
Specific target orga	n toxicity - repeated	exposure
STOT - repeated ex	posure Based	on available data the classification criteria are not met. (OECD 408)
Aspiration hazard		
Aspiration hazard		e fatal if swallowed and enters airways. Entry into the lungs following ingestion or g may cause chemical pneumonitis.
General information	•	oduct does not contain substances considered to have endocrine disrupting properties is of 0.1% or higher.
Toxicological inform	ation on ingredient	<u>S.</u>
		Renewable hydrocarbons (diesel type fraction)
Acute	toxicity - oral	
Notes	(oral LD₅₀)	LD₅₀ >2000 mg/kg, Oral, Rat (EC B1 tris)
Acute	toxicity - dermal	
Notes	(dermal LD₅₀)	LD₅₀ > 2000 mg/kg, Dermal, Rat (EC B3)
SECTION 12: Ecolo	gical information	
12.1. Toxicity		
Toxicity	Based	on available data the classification criteria are not met.
Ecological information	on on ingredients.	
		Renewable hydrocarbons (diesel type fraction)
Acute	aquatic toxicity	
Acute	toxicity - fish	LL₅₀, 96 hours: > 1000 mg/l, WAF (OECD 203)
Acute inverte	toxicity - aquatic brates	EL50, 48 hours: > 100 mg/l, WAF (OECD 202)
Acute plants	toxicity - aquatic	EL50, 72 hours: > 100 mg/l, Algae WAF (OECD 201)

Acute toxicity -EC50, 30-180 minutes: > 1000 mg/l, Micro-organisms (wastewater sludge)microorganisms(OECD 209)

Chronic aquatic	toxicity
Chronic toxicity - invertebrates	• aquatic NOEC, 21 days: 1 mg/l, LOEC, 21 days: 3,2 mg/l, WAF (OECD 211) Sediment organisms NOEC, 10 days: 373 mg/kg, LOEC, 10 days: 1165 mg/kg, LC₅₀, 10 days: 1200 mg/kg, (OSPAR Protocols, Part A: Sediment Bioassay, 2005)
12.2. Persistence and degrad	ability
Stability (hydrolysis)	No significant reaction in water.
Biodegradation	Rapidly degradable (OECD 301B).
Ecological information on ingr	edients.
	Renewable hydrocarbons (diesel type fraction)
Biodegradation	Rapidly degradable (OECD 301B).
12.3. Bioaccumulative potentia	
Bioaccumulative potential	Possibly bioaccumulative.
Partition coefficient	log Kow: > 6,5 (EC A8)
12.4. Mobility in soil	
Mobility	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 vPv	B assessment
Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.
12.6. Other adverse effects	
Other adverse effects	Not known.
Endocrine-disrupting properties	This product does not contain substances considered to have endocrine disrupting properties at levels of 0.1% or higher.
SECTION 13: Disposal consid	lerations
13.1. Waste treatment method	<u>ds</u>
Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. 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.
SECTION 14: Transport inform	nation

Sea transport notes	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	
14.1. UN number		
UN No. (ADR/RID)	1202	
UN No. (IMDG)	Not classified under IMDG.	
14.2. UN proper shipping name	9	
Proper shipping name (ADR/RID)	UN 1202 DIESEL FUEL	
14.3. Transport hazard class(e	s)	
ADR/RID class	3	
ADN subsidiary risk	F (floater)	
14.4. Packing group		
ADR/RID packing group	III	
14.5. Environmental hazards		
Environmentally hazardous sul	bstance/marine pollutant	
14.6. Special precautions for u	ser	
Hazard Identification Number (ADR/RID)	30	
Tunnel restriction code	(D/E)	
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.	
SECTION 15: Regulatory infor	mation	
15.1. Safety, health and enviro	nmental regulations/legislation specific for the substance or mixture	
National regulations	UK REACH Registration number: UK-01-9638319484-0-XXXX.	

National regulationsUK REACH Registration number: UK-01-9638319484-0-XXXX.Only Representative UK: Penman Consulting Limited 41, Aspect House, Waylands Avenue,
Grove Business Park, Wantage, Oxon, OX12 9FF, United Kingdom; Telephone: 01367
718474, Email: pcltd41@penmanconsulting.com.
Location of manufacture: Neste Rotterdam Refinery, the Netherlands.
EU regulatory references for the safety data sheet:
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18
December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of
Chemicals (REACH) (as amended)
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16
December 2008 on classification, labelling and packaging of substances and mixtures (as
amended)

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	DNEL = Derived No-Effect Level PNEC = Predicted No-Effect Concentration WAF = Water Accommodated Fraction
Key literature references and sources for data	Regulations, databases, literature, own research. Chemical Safety Report Renewable hydrocarbons (diesel type fraction), 2017.
Revision comments	Updated, sections: 1, 2, 11, 12 NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	02/02/2023
Supersedes date	26/07/2022
SDS number	5359
Hazard statements in full	H304 May be fatal if swallowed and enters airways.

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	<u>e</u>
	Emission days: 300 days/year
Other given operational conditional	tions affecting environmental exposure
Emission factor - air	0,001%
Emission factor - water	4E-7%.
Emission factor - soil	0,001%
Environmental factors not influ	uenced 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 re	lated to external treatment of waste for disposal
Waste treatment	Dispose of waste in accordance with environmental legislation.
Conditions and measures re	lated 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	g 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 u	se
	Covers daily exposures up to 8 hours (unless stated differently).
Human factors not influence	d by risk management
Potentially exposed body parts	PROC 3, PROC 15: Covers skin contact area up to 240 cm ² . Palm of one hand. PROC 2, PROC 9: Covers skin contact area up to 480 cm ² . Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm ² . Both hands.
Other given operational conc	litions 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 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 PROC9b Transfer of substance or mixture into small containers (dedicated facilities proc9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.
	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 us	<u>e</u>
	Emission days: 300 days/year
Other given operational condi	tions 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 influ	uenced 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 rela	ted to external treatment of waste for disposal
Disposal method	Dispose of waste in accordance with environmental legislation.
Conditions and measures rela	ted 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	
Product characteristics Physical state	Liquid
	Liquid Covers percentage substance in the product up to 100% (unless stated differently).
Physical state	Covers percentage substance in the product up to 100% (unless stated differently).
Physical state Concentration details	Covers percentage substance in the product up to 100% (unless stated differently).
Physical state Concentration details	Covers percentage substance in the product up to 100% (unless stated differently). e Covers daily exposures up to 8 hours (unless stated differently).
Physical state Concentration details Frequency and duration of us	Covers percentage substance in the product up to 100% (unless stated differently). e Covers daily exposures up to 8 hours (unless stated differently).
Physical state Concentration details Frequency and duration of us Human factors not influenced Potentially exposed body parts	Covers percentage substance in the product up to 100% (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). by risk management PROC 1, PROC 3, PROC 15: Covers skin contact area up to 240 cm ² . Palm of one hand. PROC 2, PROC 5, PROC 9: Covers skin contact area up to 480 cm ² . Palm of both hands.
Physical state Concentration details Frequency and duration of us Human factors not influenced Potentially exposed body parts	Covers percentage substance in the product up to 100% (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). by risk management PROC 1, PROC 3, PROC 15: Covers skin contact area up to 240 cm ² . Palm of one hand. PROC 2, PROC 5, PROC 9: Covers skin contact area up to 480 cm ² . Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm ² . Both hands.
Physical state Concentration details Frequency and duration of us Human factors not influenced Potentially exposed body parts Other given operational condi	Covers percentage substance in the product up to 100% (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). by risk management PROC 1, PROC 3, PROC 15: Covers skin contact area up to 240 cm ² . Palm of one hand. PROC 2, PROC 5, PROC 9: Covers skin contact area up to 480 cm ² . Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm ² . Both hands. tions affecting workers exposure
Physical state Concentration details Frequency and duration of us Human factors not influenced Potentially exposed body parts Other given operational condi Setting	Covers percentage substance in the product up to 100% (unless stated differently). Covers daily exposures up to 8 hours (unless stated differently). by risk management PROC 1, PROC 3, PROC 15: Covers skin contact area up to 240 cm ² . Palm of one hand. PROC 2, PROC 5, PROC 9: Covers skin contact area up to 480 cm ² . Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm ² . Both hands. tions affecting workers exposure Indoor use.

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 (H	lealth 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
	exposure (Industrial - Environment 1)
Amounts used	Fraction of EU tonnage used in region: 1 Daily amount per site: ≤ 5000 t

Frequency and duration of use

Emission days: 300 days/year

Annual amount per site: ≤ 10 000 t

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 (m ³ /day): 2000.
Conditions and measures re	elated to external treatment of waste for disposal
Disposal method	Dispose of waste in accordance with environmental legislation.
Conditions and measures re	elated to external recovery of waste
Recovery method	Retain drain-downs in sealed storage pending disposal or for subsequent recycle.
2. Conditions of use affectin	g 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 u	ISE
	Covers daily exposures up to 8 hours (unless stated differently).
Human factors not influence	d by risk management
Potentially exposed body parts	PROC 1, PROC 3, PROC 15, PROC 16: Covers skin contact area up to 240 cm ² . 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 con	ditions 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	<u>e</u>
	Emission days: 365 days/year
•	tions affecting environmental exposure
Emission factor - air	0,01 %
Emission factor - water	0,001 %
Emission factor - soil	0,001 %
Environmental factors not influ Dilution	Local freshwater dilution factor: 10
Diduon	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 rela	ated 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 us	e
	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 cm ² . Palm of one hand. PROC 2: Covers skin contact area up to 480 cm ² . Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm ² . 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	

22/29

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 us	Emission days: 365 days/year	
Other given operational condi	itions affecting environmental exposure	
Emission factor - air		
Emission factor - water	0,001 %	
Emission factor - soil	0,001 %	
Environmental factors not infl	Environmental factors not influenced by risk management measures	
Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100	
Risk management measures		

24/29

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 rela	ted 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 conditi	ons 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.

Exposure scenario Use as Intermediate - Industrial

Identification	
Product name	Renewable hydrocarbons (diesel type fraction)
EU REACH registration number	01-2119450077-42-XXXX
Version number	2017
Es reference	05
1. Title of exposure scenario	
Main title	Use as Intermediate - Industrial
Process scope	Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).
Main sector	SU3 Industrial uses
Environment	
Environmental release category	ERC6a Use of intermediate
SPERC	ESVOC SPERC 6.1a.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.
2. Conditions of use affecting	exposure (Industrial - Environment 1)
Amounts used	Fraction of EU tonnage used in region: 1 Daily amount per site: ≤ 50 t Annual amount per site: ≤ 15 000 t

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure		
Emission factor - air	0,002%	
Emission factor - water	0,001%	
Emission factor - soil	0.1%	

Use as Intermediate - 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: Covers skin contact area up to 240 cm ² . Palm of one hand. PROC 2, PROC 4: Covers skin contact area up to 480 cm ² . Palm of both hands. PROC 8a, 8b: Covers skin contact area up to 960 cm ² . 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.	
Rick management measures		

Risk management measures

Use as Intermediate - Industrial

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

General exposures (closed systems) With sample collection With occasional controlled exposure (PROC 2) No specific measures identified.

General exposures (closed systems) Batch process (PROC 3) No specific measures identified.

General exposures (open systems) Batch process With sample collection (PROC 4) No specific measures identified.

Sampling (PROC 8b) No specific measures identified.

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 (closed systems) (PROC 8b) 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.

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.

Biofuel Express is a leading distributor of 100% fossil-free biofuels such as HVO Renewable Diesel and B100 Biodiesel (RME). Our primary focus is the 100% biofuel market. We are passionate about the green environmental impact of sustainable fuel.

Biofuel Express specializes in providing advice and calculating the benefits of fossil fuels. This makes us the right partner for you if you want to transition to 100% fossil-free operation of your diesel-powered vehicles.

For the past 15 years, we have specialized in converting fleets and equipment for refueling buses, trucks, and cars from regular diesel to 100% fossil-free operation.

Our market-leading, high-quality products can be refueled directly at our stations in Sweden and Denmark or delivered to your own tanks. Biofuel Express is your guarantee of reliable distribution.



YOUR SUPPLIER OF FOSSIL FREE FUEL

www.biofuel-express.com