SAFETY DATA SHEET

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

1.1 Product identifier

Product name	**Renewable hydrocarbons (diesel type fraction)**
Other means of identification	Green diesel, HVO (hydrotreated vegetable oil), Renewable Hydrocarbon Diesel
Proper shipping name	MARPOL Annex 1 rules apply for bulk shipments by sea. Category: Alkanes (C10–C26), linear and branched, (flashpoint >60°C)
SDS #	STI2326
EC number	700-571-2
CAS number	Not available.
REACH Registration number	01-2120043692-58-0010
Product type	Liquid.

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

Identified uses
Use in coatings - Consumer
Use in coatings - Industrial
Use in coatings - Professional
Distribution
Use in explosives - Professional
Formulation (Bitumen solution)
Formulation (Fuel blends)
Use in fuel - Consumer
Use in fuel - Industrial
Use in fuel - Professional
Use in functional fluids - Consumer
Use in functional fluids - Industrial
Use in functional fluids - Professional
Use as an intermediate
Use in lubricants - Consumer
Use in lubricants - Industrial
Use in lubricants - Professional
Manufacture
(Re)-packing of the substance
Use in road and construction products
Use in water treatment agents - Industrial
Use in water treatment agents - Professional

Use of the substance/ mixture	Fuel blending component.

1.3 Details of the supplier of the safety data sheet

Supplier	BP Oil International Chertsey Road Sunbury on Thames Middlesex TW16 7BP United Kingdom
E-mail address	MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER	Tel No: +44 (0)1865 407333

REACH Registration number

Registration number	Legal entity
01-2120043692-58-0010	BP Europa SE

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition UVCB

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

Flam. Liq. 3, H226
Asp. Tox. 1, H304

See Section 16 for the full text of the H statements declared above.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

Hazard pictograms

Signal word Danger

Hazard statements
H226 - Flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.

Precautionary statements

General
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

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

Response
P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage
P405 - Store locked up.

Disposal
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients Renewable hydrocarbons (diesel type fraction)

Supplemental label elements Repeated exposure may cause skin dryness or cracking.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings Yes, applicable.

Tactile warning of danger Yes, applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

PBT	P	B	T	vPvB	vP	vB
No	N/A	No	No	No	N/A	No

Other hazards which do not result in classification
Prolonged or repeated contact may dry skin and cause irritation.

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour may cause flash fire or explosion.

SECTION 3: Composition/information on ingredients

3.1 Substances

Product definition UVCB

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Renewable hydrocarbons (diesel type fraction)	REACH #: 01-2120043692-58 EC: 700-571-2	100	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	-	[*]

See Section 16 for the full text of the H statements declared above.

Type

[*] Substance

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact Wash skin thoroughly with soap and water or use recognised skin cleanser. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather, particularly footwear, must be discarded. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Potential acute health effects

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Skin contact No known significant effects or critical hazards.

Eye contact No known significant effects or critical hazards.

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

Inhalation May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs. Vapour, mist or fume may irritate the nose, mouth and respiratory tract.

Ingestion If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.

Skin contact Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Eye contact Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treatment should in general be symptomatic and directed to relieving any effects.
Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment.
Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided.
Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media

Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture

Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Vapours can form explosive mixtures with air. Vapours are heavier than air and can spread along the ground or float on water surfaces to remote ignition sources. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Liquid will float and may reignite on surface of water.

Hazardous combustion products

Combustion products may include the following:
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

5.3 Advice for firefighters

Special precautions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Additional information

Not Explosive

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Eliminate all ignition sources. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities. Collect recovered product and other contaminated materials in suitable tanks or containers for recycle, recovery or safe disposal.

6.3 Methods and material for containment and cleaning up

Small spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres.

SECTION 6: Accidental release measures

Large spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dike spill area and do not allow product to reach sewage system and surface or ground water. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 5 for firefighting measures.
See Section 8 for information on appropriate personal protective equipment.
See Section 12 for environmental precautions.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment. Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Do not reuse container. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep away from heat and direct sunlight. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers.

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Do not enter storage tanks. If entry to vessels is necessary, follow permit to work procedures. Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is intrinsically safe (i.e. will not produce sparks). Explosive air/vapour mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

7.3 Specific end use(s)

Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits No exposure limit value known.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived No Effect Level

Product/ingredient name	Type	Exposure		Value	Population	Effects
Renewable hydrocarbons (diesel type fraction)	DNEL	Long term Inhalation	-	147 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	-	42 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	-	94 mg/m³	General population	Systemic
	DNEL	Long term Dermal	-	18 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	-	18 mg/kg bw/day	General population	Systemic

Predicted No Effect Concentration

Product/ingredient name	Compartment Detail	Value	Method Detail
Renewable hydrocarbons (diesel type fraction)	Secondary Poisoning	33.3 mg/kg	-
	Fresh water	0.01 mg/l	Assessment Factors
	Marine water	0.01 mg/l	Assessment Factors
	Intermittent release	0.1 mg/l	Assessment Factors
	Fresh water sediment	3810 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	3.73 mg/kg dwt	Assessment Factors
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Soil	761 mg/kg dwt	Equilibrium Partitioning

8.2 Exposure controls

Appropriate engineering controls Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.
Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Hygiene measures Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection If local exhaust ventilation or other methods of ventilation are not possible or are insufficient, wear suitable respiratory protective devices. Wear suitable respiratory protective devices if there is a risk of exposure limits being exceeded. The choice of suitable respiratory device will depend upon a risk assessment of the workplace environment and the task being carried out. If required, the respiratory device must be certified as safe in defined explosive atmospheres (EX Label). Respiratory protective devices must be checked to ensure they fit correctly each time they are worn. Please consult European standard EN 529 for further guidance on the selection, use, care and maintenance of respiratory protective devices.

SECTION 8: Exposure controls/personal protection

Suitable breathing apparatus (independent of ambient atmosphere) must be worn if any of the following situations apply.
- When the workplace atmosphere is considered to be immediately dangerous to life and health.
- When there is a risk of the workplace atmosphere being oxygen deficient.
- When the workplace atmosphere is uncontrolled.
- When the workplace atmosphere is unknown.
- When there is a risk of loss of consciousness or asphyxiation
- When entry into a confined space is required.
- When there is a risk of gases being released that could be a fire or explosion hazard.
- When the concentration of contaminants in the atmosphere exceeds the level of protection (maximum allowed concentration) given by a filtering device
- When the contaminants have a low odour that would not be tasted or smelt by the wearer of a filtering device if the filter became exhausted or saturated.
- When there is a risk of hydrogen sulphide exposure limits being exceeded.

If there is a requirement for the use of a respiratory protective device, but the use of breathing apparatus (independent of ambient atmosphere) is not required, then a suitable filtering device must be worn.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Eye/face protection

Chemical splash goggles.

Skin protection

Hand protection

General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Wear chemical resistant gloves.
Do not re-use gloves.
Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis.
Protective gloves must give suitable protection against mechanical risks (i.e. abrasion, blade cut and puncture).
The frequency of replacement will depend upon the circumstances of use.

Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.
Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.
If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.
It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

SECTION 8: Exposure controls/personal protection

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

• Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

• Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Recommended: Nitrile gloves.

Skin and body

Wear suitable protective clothing.
Footwear highly resistant to chemicals.
When there is a risk of ignition wear inherently fire resistant protective clothes and gloves.
Refer to standard: ISO 11612
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and gloves should all be anti-static.
Refer to standard: EN 1149
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination.
When the risk of skin exposure is high (from experience this could apply to the following tasks: cleaning work, maintenance and service, filling and transfer, taking samples and cleaning up spillages) then a chemical protective suit and boots will be required.
Work clothing / overalls should be laundered on a regular basis. Laundering of contaminated work clothing should only be done by professional cleaners who have been told about the hazards of the contamination. Always keep contaminated work clothing away from uncontaminated work clothing and uncontaminated personal clothes.

Refer to standards:

Respiratory protection: EN 529
Gloves: EN 420, EN 374
Eye protection: EN 166
Filtering half-mask: EN 149
Filtering half-mask with valve: EN 405
Half-mask: EN 140 plus filter
Full-face mask: EN 136 plus filter
Particulate filters: EN 143
Gas/combined filters: EN 14387

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state Liquid.

Colour Colourless.

Odour Diesel fuel

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point -20°C (-4°F)

Initial boiling point and boiling range 242°C (467.6°F)

Flash point ☑ Closed cup: ≥55°C (≥131°F)

SECTION 9: Physical and chemical properties

Evaporation rate Not available.

Flammability (solid, gas) Not applicable. Endpoint waived according to REACH Annex VII, IX or XI

Upper/lower flammability or explosive limits Not applicable. Endpoint waived according to REACH Annex VII, IX or XI

Vapour pressure 0.087 kPa (0.6533 mm Hg) [25°C (77°F)]

Relative vapour density >1 [Air = 1]

Relative density 0.772

Solubility(ies)

Media	Result
water	Not soluble

Solubility at room temperature 0.000075 g/l

Miscible with water No.

Partition coefficient: n-octanol/ water 8.4

Auto-ignition temperature 204°C (399.2°F)

Decomposition temperature Not applicable. Endpoint waived according to REACH Annex VII, IX or XI

Viscosity Kinematic: 2.6 mm^2/s (2.6 cSt) at 40°C
Kinematic: 3.97 mm^2/s (3.97 cSt) at 20°C

Explosive properties Not Explosive

Oxidising properties Not an oxidiser.

Particle characteristics

Median particle size Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

10.2 Chemical stability The product is stable.

10.3 Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerisation will not occur.

10.4 Conditions to avoid Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas. Avoid excessive heat.

10.5 Incompatible materials Reactive or incompatible with the following materials: oxidising materials.

10.6 Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result / Route	Test authority / Number		Species	Dose	Exposure	Remarks
Renewable hydrocarbons (diesel type fraction)	LC50 Inhalation Vapour	Equivalent to OECD	403	Rat - Male	4467 ppm	8 hours	Based on n-nonane
	LD50 Dermal	EU	B3	Rat	>2000 mg/kg No mortality	-	-
	LD50 Oral	EU	B1 tris	Rat - Female	>2000 mg/kg No mortality	-	-

SECTION 11: Toxicological information

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Test authority / Test number		Species	Route / Result	Test concentration	Remarks
Renewable hydrocarbons (diesel type fraction)	EU	B5	Rabbit	Eyes - Non-irritating to the eyes.	-	-
	EU	B4	Rabbit	Skin - Non-irritant to skin.	-	-

Skin Not classified. Based on available data, the classification criteria are not met.

Eyes Not classified. Based on available data, the classification criteria are not met.

Sensitiser

Product/ingredient name	Route	Test authority / Test number		Species	Result	Remarks
Renewable hydrocarbons (diesel type fraction)	skin	EU	B6	Guinea pig	Not sensitising	-

Skin Not classified. Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY

Product/ingredient name	Test authority / Test number	Cell		Type	Result	Remarks
Renewable hydrocarbons (diesel type fraction)	EU B17	Cell: Somatic	Experiment: In vitro	Subject: Mammalian-Animal	Negative	-
	EU B10	Cell: Somatic	Experiment: In vitro	Subject: Mammalian-Human	Negative	-
	EU B13/14	-	-	Subject: Bacteria	Negative	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/ingredient name	Test authority / Test number		Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
Renewable hydrocarbons (diesel type fraction)	Equivalent to OECD	416	Rat	Oral	-	Negative	Negative	Negative	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Conclusion/Summary Aspiration hazard: May be fatal if swallowed and enters airways. Classification on basis substance is a hydrocarbon and has a kinematic viscosity of 20.5 mm2/s or less, measured at 40°C.

Specific target organ toxicity

Product/ ingredient name	Hazard	Test authority / Test number		Species	Route	Type	Dose	Exposure	Target organs	Remarks
Renewable hydrocarbons (diesel type fraction)	-	Equivalent to OECD	408	Rat	Oral	NOAEL	1000 mg/kg	-	-	-

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Information on likely routes of exposure Routes of entry anticipated: Dermal, Inhalation, Eyes.

Potential acute health effects

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

SECTION 11: Toxicological information

Skin contact No known significant effects or critical hazards.

Eye contact No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation No specific data.

Ingestion Adverse symptoms may include the following:
nausea or vomiting

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Eye contact No specific data.

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

Inhalation May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs. Vapour, mist or fume may irritate the nose, mouth and respiratory tract.

Ingestion If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.

Skin contact Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Eye contact Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes.

Potential chronic health effects

General Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Remarks - Endocrine disruptor - Health Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Test authority / Test number		Species	Type / Result	Exposure	Effects	Remarks
Renewable hydrocarbons (diesel type fraction)	OECD	209	Micro-organism	EC50 >1000 mg/l Nominal Fresh water	30 minutes	Respiration rate	-
	OECD	209	Micro-organism	EC50 >1000 mg/l Nominal Fresh water	3 hours	Respiration rate	-
	OECD	201	Algae	Acute EL50 >100 mg/l Nominal Fresh water	72 hours	(growth rate)	-
	OECD	202	Daphnia	Acute EL50 >100 mg/l Nominal Fresh water	48 hours	Immobilisation	-
	OECD	203	Fish	Acute LL50 >1000 mg/l Nominal Fresh water	96 hours	Mortality	-
	OECD	211	Daphnia	Chronic LOEC 3.2 mg/l Nominal Fresh water	21 days	Reproduction	-
	OECD	211	Daphnia	Chronic NOEC 1 mg/l Nominal Fresh water	21 days	Reproduction	-

Environmental hazards Not classified as dangerous

SECTION 12: Ecological information

12.2 Persistence and degradability

Not available.

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
Renewable hydrocarbons (diesel type fraction)	OECD 301B	82 % - Readily - 28 days	-

12.3 Bioaccumulative potential

Not available.

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Renewable hydrocarbons (diesel type fraction)	-	116	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) >427000

Mobility Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Renewable hydrocarbons (diesel type fraction)	No	N/A	No	No	No	N/A	No

12.6 Endocrine disrupting properties Not available.

Remarks - Endocrine disruptor - Environment Not available.

12.7 Other adverse effects No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Hazardous waste Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 07 03*	other fuels (including mixtures)

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Special precautions This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.

References Commission 2014/955/EU
Directive 2008/98/EC

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1202	UN1202	UN1202	UN1202
14.2 UN proper shipping name	DIESEL FUEL	DIESEL FUEL	Diesel fuel	Diesel fuel
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	**Hazard identification number** 30 **Tunnel code** D/E	**Remarks** Table: C. Danger: 3+(F)	**Emergency schedules** F-E, S-E	-

14.6 Special precautions for user Not available.

UK Emergency Action Code: 3Y

ADR/RID Classification code: F1

ADN Classification code: F1

14.7 Maritime transport in bulk according to IMO instruments

Proper shipping name MARPOL Annex 1 rules apply for bulk shipments by sea. Category: Alkanes (C10–C26), linear and branched, (flashpoint >60°C)

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Other regulations

REACH Status The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

United States inventory (TSCA 8b) Not determined.

Australia inventory (AIIC) Not determined.

Canada inventory Not determined.

China inventory (IECSC) Not determined.

Japan inventory (CSCL) Not determined.

Korea inventory (KECI) Not determined.

Philippines inventory (PICCS) Not determined.

SECTION 15: Regulatory information

Taiwan Chemical Substances Inventory (TCSI) Not determined.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

EU - Water framework directive - Priority substances

None of the components are listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

15.2 Chemical safety assessment Complete.

SECTION 16: Other information

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SADT = Self-Accelerating Decomposition Temperature
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative
Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4/ RRN

SECTION 16: Other information

01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.

Full text of classifications [CLP/GHS]

Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3

History

Date of issue/ Date of revision 06/07/2023.

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Prepared by Product Stewardship

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

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Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in fuel - Consumer
List of use descriptors	**Identified use name:** Use in fuel - Consumer **Substance supplied to that use in form of:** In a mixture, As such **Sector of end use:** SU21 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08b, ERC08e **Market sector by type of chemical product:** PC13 **Specific Environmental Release Category:** ESVOC SpERC 9.12c.v1
Processes and activities covered by the exposure scenario	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Assessment Method	See Section 3

Section 2: Operational conditions and risk management measures

Section 2.1: Control of consumer exposure

Concentration of substance in mixture or article	Unless otherwise stated. Covers concentrations up to 100%
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5.
Other given operational conditions affecting consumers exposure:	Unless otherwise stated. Covers use in room size of 20m³, assumes use with typical ventilation Assumes activities are at ambient temperature (unless stated differently).

Contributing scenarios: Operational conditions and risk management measures

Fuels-Liquid: automotive refuelling
Operations Conditions (consumer): Covers use up to 52 days per year Covers use up to 1 time/on day of use Covers skin contact area up to 210.00cm² For each use event, covers use amounts up to 38600g Covers outdoor use. Covers use in room size of 100m³ For each use event, covers exposure up to 0.05 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fuels-Liquid: garden equipment - use
Operations Conditions (consumer): Covers use up to 26 days per year Covers use up to 1 time/on day of use For each use event, covers use amounts up to 772g Covers outdoor use. Covers use in room size of 100m³ For each use event, covers exposure up to 2.00hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fuels-Liquid: garden equipment - refuelling
Operations Conditions (consumer): Covers use up to 26 days per year Covers use up to 1 time/on day of use Covers skin contact area up to 420.00cm² For each use event, covers use amounts up to 772g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34m³ For each use event, covers exposure up to 0.03 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fuels-Liquid: lamp oil
Operations Conditions (consumer): Covers use up to 52 days per year Covers use up to 1 time/on day of use Covers skin contact area up to 210.00 cm² For each use event, covers use amounts up to 100g For each use event, covers exposure up to 0.01 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fuels-Liquid – Home heating oil
Operations Conditions (consumer): Covers use up to 365 days per year Covers use up to 1 time/on day of use Covers skin contact area up to 210.00 cm² For each use event, covers use amounts up to 1500g For each use event, covers exposure up to 0.03 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1Pa. LogKow: 8.4. Not toxic to the environment
Fraction of EU tonnage used in region	0.1
Regional use tonnage	55.7 ktonnes/year
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3 Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Consumers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in functional fluids - Consumer
List of use descriptors	**Identified use name:** Use in functional fluids - Consumer **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU21 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC09a, ERC09b **Market sector by type of chemical product:** PC16, PC17 **Specific Environmental Release Category:** ESVOC SPERC 9.13c.v1
Processes and activities covered by the exposure scenario	Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants
Assessment Method	See Section 3

Section 2: Operational conditions and risk management measures

Section 2.1: Control of consumer exposure

Concentration of substance in mixture or article	Unless otherwise stated. Covers concentrations up to 100%
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5.
Amounts used:	Unless otherwise stated. For each use event, covers use amounts up to 2200g. Covers skin contact area up to 468cm².
Frequency and duration of use:	Covers frequency up to: 1 times per day, 4 days per year. Unless otherwise stated. Covers exposure up to 0.17 hours per event (unless stated differently).
Other given operational conditions affecting consumers exposure:	Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34m³, assumes use with typical ventilation Assumes activities are at ambient temperature (unless stated differently).

Contributing scenarios: Operational conditions and risk management measures

Heat transfer fluids
Hydraulic fluids
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1Pa. LogKow: 8.4. Not toxic to the environment
Fraction of EU tonnage used in region	0.1
Regional use tonnage	475 Tonnes/year
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3 Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Consumers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in coatings - Consumer
List of use descriptors	**Identified use name:** Use in coatings - Consumer **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU21 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08a, ERC08d **Market sector by type of chemical product:** PC01, PC04, PC09a, PC09b, PC09c, PC15, PC18, PC23, PC24, PC31, PC34, PC37 **Specific Environmental Release Category:** ESVOC SpERC 8.3c.v1
Processes and activities covered by the exposure scenario	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.
Assessment Method	See Section 3

Section 2: Operational conditions and risk management measures

Section 2.1: Control of consumer exposure

Concentration of substance in mixture or article	Unless otherwise stated. Covers concentrations up to 100%
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5.
Amounts used:	Unless otherwise stated. For each use event, covers use amounts up to 13,800g. Covers skin contact area up to 857.5 cm².
Frequency and duration of use:	Covers frequency up to: 1 times per day. Unless otherwise stated. Covers exposure up to 6 hours per event (unless stated differently).
Other given operational conditions affecting consumers exposure:	Unless otherwise stated. Covers use in room size of 20m³, assumes use with typical ventilation Assumes activities are at ambient temperature (unless stated differently).

Contributing scenarios: Operational conditions and risk management measures

Adhesives, sealants-Glues, hobby use
Operations Conditions (consumer): Covers concentrations up to 30%; Covers use up to 110 days per year Covers skin contact area up to 35.73cm² For each use event, covers use amounts up to 9g For each use event, covers exposure up to 4 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants-Glues DIY-use (carpet glue, tile glue, wood parquet glue)
Operations Conditions (consumer): Covers concentrations up to 30%; Covers use up to 1 days per year Covers skin contact area up to 110cm² For each use event, covers use amounts up to 1000g
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants-Glue from spray
Operations Conditions (consumer): Covers concentrations up to 30%; Covers use up to 6 days per year Covers skin contact area up to 35.73cm² For each use event, covers use amounts up to 85.05g For each use event, covers exposure up to 4.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants-Sealants
Operations Conditions (consumer): Covers concentrations up to 20%; Covers use up to 55 days per year Covers skin contact area up to 35.73cm² For each use event, covers use amounts up to 75g For each use event, covers exposure up to 1.00 hours per event

Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Anti-freeze and de-icing products-Washing car window
Operations Conditions (consumer): Covers concentrations up to 2%; Covers use up to 365 days per year For each use event, covers use amounts up to 0.5g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34m³ For each use event, covers exposure up to 0.02 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Anti-freeze and de-icing products-Pouring into radiator
Operations Conditions (consumer): Covers concentrations up to 10%; Covers use up to 365 days per year Covers skin contact area up to 428.00cm² For each use event, covers use amounts up to 2000g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Anti-freeze and de-icing products-Lock de-icer
Operations Conditions (consumer): Covers use up to 110 days per year For each use event, covers use amounts up to 4g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.25 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, fillers, putties, thinners-Waterborne latex wall paint
Operations Conditions (consumer): Covers concentrations up to 5%; Covers use up to 4 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 100g For each use event, covers exposure up to 2.20 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, fillers, putties, thinners-Solvent-rich, high-solid, water-borne paint
Operations Conditions (consumer): Covers use up to 6 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 8g For each use event, covers exposure up to 2.20hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, fillers, putties, thinners-Aerosol spray can
Operations Conditions (consumer): Covers use up to 2 days per year For each use event, covers use amounts up to 100g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.30 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Coatings and paints, fillers, putties, thinners-Removers (paint-, glue-, wall paper-, sealant-remover)
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 3 days per year For each use event, covers use amounts up to 250g For each use event, covers exposure up to 2.00hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay-Fillers and putty
Operations Conditions (consumer): Covers concentrations up to 2%; Covers use up to 120 days per year Covers skin contact area up to 35.70cm² For each use event, covers use amounts up to 85g For each use event, covers exposure up to 4.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay-Plasters and floor equalisers
Operations Conditions (consumer): Covers concentrations up to 2%; Covers use up to 12 days per year For each use event, covers exposure up to 2.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Fillers, putties, plasters, modelling clay-Modelling clay
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 99 days per year Covers skin contact area up to 254.40cm² For each use event, covers use amounts up to 100g For each use event, covers exposure up to 2.20 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Finger paints-Finger paints
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 30 days per year Covers skin contact area up to 254.40cm² For each use event, assumes swallowed amount of 1.35g For each use event, covers use amounts up to 100g For each use event, covers exposure up to 1.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Non-metal surface treatment products-Waterborne latex wall paint
Operations Conditions (consumer): Covers concentrations up to 5%; Covers use up to 4 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 100g For each use event, covers exposure up to 2.20 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Non-metal surface treatment products-Solvent-rich, high-solid, water-borne paint
Operations Conditions (consumer): Covers use up to 6 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 8g For each use event, covers exposure up to 2.20 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Non-metal surface treatment products-Aerosol spray can
Operations Conditions (consumer): Covers use up to 2 days per year For each use event, covers use amounts up to 100g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.30 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Non-metal surface treatment products-Removers (paint-, glue-, wall paper-, sealant-remover)
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 3 days per year For each use event, covers use amounts up to 250g For each use event, covers exposure up to 2.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Ink and toners-Ink and toners
Operations Conditions (consumer): Covers concentrations up to 6%; Covers use up to 365 days per year Covers skin contact area up to 35.70cm² For each use event, covers use amounts up to 20g For each use event, covers exposure up to 2.20 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Leather tanning, dye, finishing, impregnation and care products-Polishes, wax/cream (floor, furniture, shoes)
Operations Conditions (consumer): Covers concentrations up to15%; Covers use up to 29 days per year Covers skin contact area up to 430.00cm² For each use event, covers use amounts up to 56g For each use event, covers exposure up to 1.23 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Leather tanning, dye, finishing, impregnation and care products-Polishes, spray (furniture, shoes)
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 8 days per year Covers skin contact area up to 430.00cm² For each use event, covers use amounts up to 56g For each use event, covers exposure up to 0.33 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products-Liquids
Operations Conditions (consumer): Covers use up to 4 days per year Covers skin contact area up to 468.00cm² For each use event, covers use amounts up to 2200g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products-Pastes
Operations Conditions (consumer): Covers concentrations up to 20%; Covers use up to 10 days per year Covers skin contact area up to 468.00cm² For each use event, covers use amounts up to 34g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products-Sprays
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 6 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 73g For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends-Polishes, wax/cream (floor, furniture, shoes)
Operations Conditions (consumer): Covers concentrations up to 10%; Covers use up to 29 days per year Covers skin contact area up to 430.00cm² For each use event, covers use amounts up to 142g For each use event, covers exposure up to 1.23 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends-Polishes, spray (furniture, shoes)
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 8 days per year Covers skin

contact area up to 430.00cm² For each use event, covers use amounts up to 35g For each use event, covers exposure up to 0.33 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Textile dyes and impregnating products
Operations Conditions (consumer): Covers concentrations up to 10%; Covers use up to 55 days per year For each use event, covers use amounts up to 115g For each use event, covers exposure up to 1.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Water treatment chemicals: Anti-foaming agent in paints and waxes
Operations Conditions (consumer): Covers concentrations up to 5%; Covers use up to 7 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 2760g For each use event, covers exposure up to 2.20 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1Pa. LogKow: 8.4. Not toxic to the environment
Fraction of EU tonnage used in region	0.1
Regional use tonnage	60 Tonnes/year
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3 Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Consumers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in lubricants - Consumer
List of use descriptors	**Identified use name:** Use in lubricants - Consumer **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU21 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08a, ERC08d **Market sector by type of chemical product:** PC01, PC24, PC31, PC03, PC04, PC35 **Specific Environmental Release Category:** ESVOC SpERC 8.6e.v1
Processes and activities covered by the exposure scenario	Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.
Assessment Method	See Section 3

Section 2: Operational conditions and risk management measures

Section 2.1: Control of consumer exposure

Concentration of substance in mixture or article	Unless otherwise stated. Covers concentrations up to 100%
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5.
Amounts used:	Unless otherwise stated. For each use event, covers use amounts up to 2200g. Covers skin contact area up to 468cm².
Frequency and duration of use:	Covers frequency up to: 1 times per day. Unless otherwise stated. Covers exposure up to 8 hours per event (unless stated differently).
Other given operational conditions affecting consumers exposure:	Unless otherwise stated. Covers use in room size of 20m³, assumes use with typical ventilation Assumes activities are at ambient temperature (unless stated differently).

Contributing scenarios: Operational conditions and risk management measures

Adhesives, sealants-Glues, hobby use
Operations Conditions (consumer): Covers concentrations up to 30%; Covers use up to 365 days per year Covers skin contact area up to 35.73cm² For each use event, covers use amounts up to 9g For each use event, covers exposure up to 4 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants-Glue from spray
Operations Conditions (consumer): Covers concentrations up to 30%; Covers use up to 6 days per year Covers skin contact area up to 35.73cm² For each use event, covers use amounts up to 85.05g For each use event, covers exposure up to 4.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Adhesives, sealants-Sealants
Operations Conditions (consumer): Covers concentrations up to 30%;Covers use up to 365 days per year Covers skin contact area up to 35.73cm² For each use event, covers use amounts up to 75g For each use event, covers exposure up to 1.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Air care products-Air care, instant action (aerosol sprays):
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 365 days per year Covers use up to 4 times per day For each use event, covers use amounts up to 0.1g For each use event, covers exposure up to

0.25 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Air care products air care, continuous action (aerosol sprays):
Operations Conditions (consumer): Covers concentrations up to 10%; Covers use up to 365 days per year Covers skin contact area up to 35.70cm² For each use event, covers use amounts up to 0.48g
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Anti-freeze and de-icing products-Washing car window
Operations Conditions (consumer): Covers concentrations up to 2%; Covers use up to 365 days per year For each use event, covers use amounts up to 0.5g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34m³ For each use event, covers exposure up to 0.02 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Anti-freeze and de-icing products-Pouring into radiator
Operations Conditions (consumer): Covers concentrations up to 10%; Covers use up to 365 days per year Covers skin contact area up to 428.00cm² For each use event, covers use amounts up to 2000g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Anti-freeze and de-icing products-Lock de-icer
Operations Conditions (consumer): Covers use up to 55 days per year Covers skin contact area up to 214.40cm² For each use event, covers use amounts up to 4g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.25 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products-Liquids
Operations Conditions (consumer): Covers use up to 4 days per year Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34 m³ For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products-Pastes
Operations Conditions (consumer): Covers concentrations up to 20%; Covers use up to 10 days per year For each use event, covers use amounts up to 34g For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Lubricants, greases, release products-Sprays
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 6 days per year Covers skin contact area up to 428.75cm² For each use event, covers use amounts up to 73g For each use event, covers exposure up to 0.17 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends-Polishes, wax/cream (floor, furniture, shoes)
Operations Conditions (consumer): Covers concentrations up to 10%; Covers use up to 29 days per year Covers skin contact area up to 430.00cm² For each use event, covers use amounts up to 142g For each use event, covers exposure up to 1.23 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Polishes and wax blends-Polishes, spray (furniture, shoes)
Operations Conditions (consumer): Covers concentrations up to 50%; Covers use up to 8 days per year Covers skin contact area up to 430.00cm² For each use event, covers use amounts up to 35g For each use event, covers exposure up to 0.33 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Washing and cleaning products Car care products - Car care products
Operations Conditions (consumer): Covers concentrations up to 3.3%; Covers use up to 26 days per year Covers skin contact area up to 430.00cm² For each use event, covers use amounts up to 1000g Covers use in a one car garage (34 m³) under typical ventilation. Covers use in room size of 34m³ For each use event, covers exposure up to 2.00 hours per event
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1Pa. LogKow: 8.4. Not toxic to the environment
Fraction of EU tonnage used in region	0.1
Regional use tonnage	72.0 Tonnes/year
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3 Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Consumers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Manufacture
List of use descriptors	**Identified use name:** Manufacture **Process Category:** PROC01, PROC02, PROC08a, PROC08b, PROC15 **Sector of end use:** SU08 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC01 **Specific Environmental Release Category:** ESVOC SpERC 1.1.v1
Processes and activities covered by the exposure scenario	Manufacturing and sampling in closed continuous process, bulk transfers, maintenance of closed lines, associated laboratory activities and storage.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

General exposures (closed systems) With sample collection: No specific measures identified.

Process sampling: Wear suitable gloves tested to EN374. Outdoor

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Bulk transfers (Closed systems): No specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. All waste product is assumed to be collected and returned for re-processing or use as a fuel.

Storage: Transfer via enclosed lines. Store substance within a closed system. Outdoor

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Annual site tonnage	800000 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	1.0E-4
Release fraction to soil from process (initial release prior to RMM)	1.0E-4
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-5
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	90 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	≥92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	Not applicable.
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in coatings - Industrial
List of use descriptors	**Identified use name:** Use in coatings - Industrial **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC15 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU03 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC07 **Market sector by type of chemical product:** PC09a **Specific Environmental Release Category:** ESVOC SpERC 4.3a.v1
Processes and activities covered by the exposure scenario	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

Bulk transfers Dedicated facility: Wear suitable gloves tested to EN374.

Material transfers Drum/batch transfers Transfer from/pouring from containers: Wear suitable gloves tested to EN374.

Film formation - force drying, stoving and other technologies: Handle substance within a closed system.

Film formation - air drying: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear suitable gloves tested to EN374.

Preparation of material for application Mixing operations (Open systems): Wear suitable gloves tested to EN374.

Spraying (automatic/robotic): Carry out in a vented booth or extracted enclosure. Wear suitable gloves tested to EN374.

Manual spraying: Wear a respirator conforming to EN140 with type A filter or better. Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Roller, spreader, flow application: Provide extract ventilation to points where emissions occur. Wear suitable gloves tested to EN374.

Dipping, immersion and pouring: Provide extract ventilation to points where emissions occur. Wear suitable gloves tested to EN374.

Production or preparation of articles by tabletting, compression, extrusion or pelletisation: Wear suitable gloves tested to EN374.

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	19.9 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	1.99 ktonnes/year
Frequency and duration of use:	
Emission days	100 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.098
Release fraction to soil from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	2.0E-5
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	90 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Distribution
List of use descriptors	**Identified use name:** Distribution **Process Category:** PROC02, PROC03, PROC08a, PROC08b, PROC15 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU08 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC01 **Specific Environmental Release Category:** ESVOC SpERC 1.1b.v1
Processes and activities covered by the exposure scenario	Loading (including marine vessel/barge, rail/road car and IBC loading) of substance, including its distribution and associated laboratory activities.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems) Material transfer in closed lines: Outdoor

Process sampling: Wear suitable gloves tested to EN374. Outdoor

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Bulk transfers (Closed systems): Wear suitable gloves tested to EN374. Use vapour recovery units when necessary. Outdoor

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. All waste product is assumed to be collected and returned for re-processing or use as a fuel.

Storage: Transfer via enclosed lines. Store substance within a closed system. Outdoor

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	800 ktonnes/year
Annual site tonnage	40000 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	1.0E-5
Release fraction to soil from process (initial release prior to RMM)	1.0E-5
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-7
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	90 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	≥92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	Not applicable.
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in fuel - Industrial
List of use descriptors	**Identified use name:** Use in fuel - Industrial **Process Category:** PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC15, PROC16 **Substance supplied to that use in form of:** In a mixture, As such **Sector of end use:** SU03 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC07 **Market sector by type of chemical product:** PC13 **Specific Environmental Release Category:** ESVOC SpERC 7.12a.v1
Processes and activities covered by the exposure scenario	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

General exposures (closed systems) Continuous process: Ensure material transfers are under containment or extract ventilation.

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

Filling/preparation of equipment from drums or containers.: Use drum pumps or carefully pour from container. Wear suitable gloves tested to EN374.

Refueling vehicles: Pumped transfer Use vapour recovery units when necessary. Wear suitable gloves tested to EN374.

Bulk transfers (Closed systems): Wear suitable gloves tested to EN374.

Process sampling: Wear suitable gloves tested to EN374.

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Vessel container cleaning: Wear suitable gloves tested to EN374. Wear suitable coveralls to prevent exposure to the

skin. Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle. Provide enhanced general ventilation by mechanical means. If above technical/ organisational control measures are not feasible, then adopt following PPE Wear positive-pressure air-supplied respirator, if required by safe entry procedures.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	457 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	45.7 ktonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	2.5E-4
Release fraction to soil from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-5
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	95 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Formulation (Bitumen solution)
List of use descriptors	**Identified use name:** Formulation (Bitumen solution) **Process Category:** PROC02, PROC03, PROC08a, PROC08b, PROC15 **Substance supplied to that use in form of:** As such **Sector of end use:** SU10 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC02 **Market sector by type of chemical product:** PC13 **Specific Environmental Release Category:** ESVOC SpERC 2.2.v1
Processes and activities covered by the exposure scenario	Formulation of the substance and its mixtures in batch operations, including storage, materials transfers, mixing, maintenance and associated laboratory activities.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): Ensure samples are obtained under containment or extract ventilation. Wear suitable gloves tested to EN374.

Mixing operations (Closed systems): Transfer materials directly to mixing vessels. Transfer via enclosed lines.

Process sampling: Wear suitable gloves tested to EN374.

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Bulk transfers (Closed systems) Closed line transfer of product to storage tanks: Wear suitable gloves tested to EN374.

Drum/batch transfers: Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines. Store finished products in closed containers (e.g., bulk tanks, drums, cans). Outdoor

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	10 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	1000 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.0025
Release fraction to soil from process (initial release prior to RMM)	1.0E-4
Release fraction to wastewater from process (initial release prior to RMM)	5.0E-6
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	0 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	≥92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Formulation (Fuel blends)
List of use descriptors	**Identified use name:** Formulation (Fuel blends) **Process Category:** PROC02, PROC03, PROC08a, PROC08b, PROC15 **Substance supplied to that use in form of:** As such **Sector of end use:** SU10 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC02 **Specific Environmental Release Category:** ESVOC SpERC 2.2.v1
Processes and activities covered by the exposure scenario	Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems) With sample collection: No specific measures identified.

Mixing operations (Closed systems): Transfer via enclosed lines. Outdoor

Process sampling: Wear suitable gloves tested to EN374. Outdoor

Bulk transfers (Closed systems): Wear suitable gloves tested to EN374.

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. All waste product is assumed to be collected and returned for re-processing or use as a fuel.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	672 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	30000 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.0025
Release fraction to soil from process (initial release prior to RMM)	1.0E-4
Release fraction to wastewater from process (initial release prior to RMM)	5.0E-6
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	0 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	≥92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	Not applicable.
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in fuel - Professional
List of use descriptors	**Identified use name:** Use in fuel - Professional **Process Category:** PROC01, PROC02, PROC08a, PROC08b, PROC16 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08b, ERC08e **Market sector by type of chemical product:** PC13 **Specific Environmental Release Category:** ESVOC SpERC 9.12b.v1
Processes and activities covered by the exposure scenario	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers: Handle substance within a closed system. Wear suitable gloves tested to EN374.

Filling/preparation of equipment from drums or containers.: Use drum pumps or carefully pour from container. Wear suitable gloves tested to EN374.

Refueling vehicles, aircraft or marine: Use drum pumps or carefully pour from container. Wear suitable gloves tested to EN374. Use vapour recovery units when necessary. Ensure material transfers are under containment or extract ventilation.

General exposures (closed systems): No other specific measures identified.

General exposures (open systems) (Closed systems): No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Vessel container cleaning: Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle. Provide enhanced general ventilation by mechanical means. If above technical/organisational control measures are not feasible, then adopt following PPE Wear positive-pressure air-supplied respirator, if required by safe entry procedures. Wear suitable gloves tested to EN374. Wear suitable coveralls to prevent exposure to the skin.

Storage: Store substance within a closed system.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	89 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	4.45 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	1.0E-4
Release fraction to soil from process (initial release prior to RMM)	1.0E-5
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-5
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	Not applicable.
Organisational measures to prevent/limit release from site:	Not applicable.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	(Re)-packing of the substance
List of use descriptors	**Identified use name:** (Re)-packing of the substance **Process Category:** PROC02, PROC03, PROC08a, PROC08b, PROC15 **Substance supplied to that use in form of:** As such **Sector of end use:** SU10 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC02 **Market sector by type of chemical product:** PC13 **Specific Environmental Release Category:** ESVOC SpERC 2.2.v1
Processes and activities covered by the exposure scenario	Packing and re-packing of the substance in batch operations, including storage, materials transfers, large and small scale packing, maintenance and associated laboratory activities.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Process sampling: Wear suitable gloves tested to EN374.

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Bulk transfers (Closed systems) Closed line transfer of product to storage tanks: Ensure material transfers are under containment or extract ventilation. Wear suitable gloves tested to EN374.

Drum/batch transfers: Wear suitable gloves tested to EN374.

Drum and small package filling: Fill containers/cans at dedicated fill points supplied with local extract ventilation. Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage: Store substance within a closed system. Transfer via enclosed lines. Store finished products in closed containers (e.g., bulk tanks, drums, cans).

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	40 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	4000 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.0025
Release fraction to soil from process (initial release prior to RMM)	1.0E-4
Release fraction to wastewater from process (initial release prior to RMM)	5.0E-6
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	0 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	≥92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in coatings - Professional
List of use descriptors	**Identified use name:** Use in coatings - Professional **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC13, PROC15, PROC19 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08a, ERC08d **Market sector by type of chemical product:** PC09a **Specific Environmental Release Category:** ESVOC SpERC 8.3b.v1
Processes and activities covered by the exposure scenario	Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

Filling/preparation of equipment from drums or containers.: Wear suitable gloves tested to EN374.

Material transfers Pumped Drum/batch transfers: Use drum pumps. Wear suitable gloves tested to EN374.

Film formation - air drying Outdoor: Ensure operation is undertaken outdoors. Wear suitable gloves tested to EN374.

Film formation - air drying Indoor: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear suitable gloves tested to EN374.

Preparation of material for application Mixing operations (Open systems): Wear suitable gloves tested to EN374.

Preparation of material for application Mixing operations (Open systems) Pouring from small containers: Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Manual spraying Indoor: Carry out in a vented booth or extracted enclosure. Wear a respirator conforming to EN140 with type A filter or better. Wear suitable gloves tested to EN374.

Manual spraying Outdoor: Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours per day. Wear a respirator conforming to EN140 with type A filter or better. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Roller, spreader, flow application: Avoid carrying out activities involving exposure for more than 4 hours per day. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Dipping, immersion and pouring: Provide extract ventilation to points where emissions occur. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Hand application - fingerpaints, pastels, adhesives: Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. Avoid carrying out activities involving exposure for more than 1 hour per day.

Production or preparation of articles by tabletting, compression, extrusion or pelletisation: Wear suitable gloves tested to EN374.

Laboratory activities: Wear suitable gloves tested to EN374. Handle in a fume cupboard or under extract ventilation.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Wear positive-pressure air-supplied respirator, if required by safe entry procedures. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	60 Tonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	3.00E-3 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.98
Release fraction to soil from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in explosives - Professional
List of use descriptors	**Identified use name:** Use in explosives - Professional **Process Category:** PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08e **Market sector by type of chemical product:** PC11
Processes and activities covered by the exposure scenario	Covers exposures arising from the manufacture and use of slurry explosives (including materials transfer, mixing and charging) and equipment cleaning.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers to/from storage Closed systems: No specific measures identified.

Drum/batch transfers Non-dedicated facility: Use drum pumps. Wear suitable gloves tested to EN374.

Mixing operations (Closed systems): No specific measures identified.

Mixing operations (Open systems): Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear suitable gloves tested to EN374.

Material transfers Non-dedicated facility: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear suitable gloves tested to EN374.

Transfer from/pouring from containers Non-dedicated facility: Use drum pumps. Wear suitable gloves tested to EN374.

Vessel container cleaning: Wear suitable gloves tested to EN374.

Equipment maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	20 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	1 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.001
Release fraction to soil from process (initial release prior to RMM)	0.01
Release fraction to wastewater from process (initial release prior to RMM)	0.02
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in functional fluids - Industrial
List of use descriptors	**Identified use name:** Use in functional fluids - Industrial **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC20 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU03 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC07 **Specific Environmental Release Category:** ESVOC SpERC 4.6a.v1
Processes and activities covered by the exposure scenario	Use as functional fluids e.g. cable oils, transfer oils, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers to/from storage: No specific measures identified.

Transfers from drums to filling machinery: Wear suitable gloves tested to EN374.

filling articles from predominantly enclosed machines: No specific measures identified.

manual filling of machines: Wear suitable gloves tested to EN374. Use drum pumps or carefully pour from container.

operation of closed equipment containing functional fluids: Restrict area of openings and provide extract ventilation to emission points when substance handled at elevated temperatures

Re-work on off specification articles: Wear suitable gloves tested to EN374.

Equipment maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	15.1 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	10 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	5.0E-4
Release fraction to soil from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-6
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	0 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in functional fluids - Professional
List of use descriptors	**Identified use name:** Use in functional fluids - Professional **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC20 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC09a, ERC09b **Specific Environmental Release Category:** ESVOC SpERC 9.13b.v1
Processes and activities covered by the exposure scenario	Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in professional equipment including maintenance and related material transfers.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Transfers from drums to filling machinery: Use drum pumps. Wear suitable gloves tested to EN374.

Transfer from/pouring from containers Wear suitable gloves tested to EN374.

operation of closed equipment containing functional fluids Elevated temperature: Restrict area of openings and provide extract ventilation to emission points when substance handled at elevated temperatures

manual filling of machines: Wear suitable gloves tested to EN374.

Re-work on off specification articles: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Equipment maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	8.410 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	0.42 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0.025
Release fraction to wastewater from process (initial release prior to RMM)	0.025
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in road and construction products
List of use descriptors	**Identified use name:** Use in road and construction products **Process Category:** PROC03, PROC08a, PROC08b, PROC10 **Substance supplied to that use in form of:** In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08e **Specific Environmental Release Category:** ESVOC SPERC 8.14a.v1
Processes and activities covered by the exposure scenario	Covers the use as binders including material transfers, application by rolling, brushing, and handling of waste.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 25%. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Mixing operations (Closed systems): Outdoor. Transfer materials directly to mixing vessels. Transfer via enclosed lines.

Material transfers (truck): Wear suitable gloves tested to EN374. Outdoor.

Material transfers (to road): Wear suitable gloves tested to EN374. Outdoor.

Process sampling: Wear suitable gloves tested to EN374. Outdoor.

Manual applications e.g. brushing, rolling: Ensure operation is undertaken outdoors. Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle. Wear suitable gloves tested to EN374.

Bulk product storage (Open systems): Wear suitable gloves tested to EN374. Outdoor.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	10 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	0.5 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.95
Release fraction to soil from process (initial release prior to RMM)	0.04
Release fraction to wastewater from process (initial release prior to RMM)	0.01
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	Not applicable.
Organisational measures to prevent/limit release from site:	Not applicable.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use as an intermediate
List of use descriptors	**Identified use name:** Use as an intermediate **Process Category:** PROC01, PROC02, PROC03, PROC15, PROC04, PROC08a, PROC08b **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU08, SU09 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC06a **Market sector by type of chemical product:** PC13 **Specific Environmental Release Category:** ESVOC SpERC 6.1a.v1
Processes and activities covered by the exposure scenario	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).
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes activities are at ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

General exposures (closed systems) With sample collection: No specific measures identified.

General exposures (closed batch process): No specific measures identified.

General exposures (open batch process): Wear suitable gloves tested to EN374. Transfer via enclosed lines.

Sample collection: Wear suitable gloves tested to EN374.

Laboratory activities: Handle in a fume cupboard or under extract ventilation. Wear suitable gloves tested to EN374.

Bulk transfers (Closed systems) e.g. bottom loading: Wear suitable gloves tested to EN374.

Bulk transfers (Open systems): Wear suitable gloves tested to EN374.

Clean-down and maintenance of equipment: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Bulk product storage: Store substance within a closed system. Transfer via enclosed lines. Outdoor.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	80 ktonnes/year
Annual site tonnage	80 ktonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	2.0E-5
Release fraction to soil from process (initial release prior to RMM)	1.0E-3
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-5
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	80 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in lubricants - Industrial
List of use descriptors	**Identified use name:** Use in lubricants - Industrial **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17, PROC18 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU03 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC04, ERC07 **Market sector by type of chemical product:** PC24 **Specific Environmental Release Category:** ESVOC SpERC 4.6a.v1
Processes and activities covered by the exposure scenario	Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

General exposures (open systems): Provide extract ventilation to points where emissions occur. Wear suitable gloves tested to EN374.

Bulk transfers Dedicated facility: Wear suitable gloves tested to EN374.

Filling/preparation of equipment from drums or containers.: Wear suitable gloves tested to EN374.

Initial factory fill of equipment Dedicated facility: No specific measures identified.

Operation and lubrication of high energy open equipment: Provide extract ventilation to points where emissions occur. Restrict area of openings to equipment.

Manual applications e.g. brushing, rolling: Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Treatment of articles by dipping and pouring: Wear suitable gloves tested to EN374.

Spraying: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear suitable gloves (tested to EN374), coverall and eye protection.

Maintenance and machine set-up: Ensure material transfers are under containment or extract ventilation. Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely. Wear suitable gloves tested

to EN374.

Draining equipment (small items): Drain or remove substance from equipment prior to break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Remanufacture of reject articles: Wear suitable gloves tested to EN374. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	23.9 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	100 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	1.5E-4
Release fraction to soil from process (initial release prior to RMM)	0.001
Release fraction to wastewater from process (initial release prior to RMM)	1.0E-6
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	70 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in lubricants - Professional
List of use descriptors	**Identified use name:** Use in lubricants - Professional **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC10, PROC11, PROC13, PROC17, PROC18, PROC20 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08a, ERC08b **Market sector by type of chemical product:** PC24 **Specific Environmental Release Category:** ESVOC SpERC 8.6c.v1
Processes and activities covered by the exposure scenario	Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No specific measures identified.

General exposures (open systems): Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear suitable gloves tested to EN374.

Operation of equipment containing engine oils and similar: No specific measures identified.

Bulk transfers Dedicated facility: Wear suitable gloves tested to EN374.

Filling/preparation of equipment from drums or containers. Dedicated facility: Wear suitable gloves tested to EN374.

Filling/preparation of equipment from drums or containers. Non-dedicated facility: Use drum pumps or carefully pour from container. Wear suitable gloves tested to EN374.

Operation and lubrication of high energy open equipment Indoor: Provide extract ventilation to points where emissions occur. Restrict area of openings to equipment. Wear suitable gloves tested to EN374.

Operation and lubrication of high energy open equipment Outdoor: Ensure operation is undertaken outdoors. Wear suitable gloves tested to EN374. Wear a respirator conforming to EN140 with type A filter or better. Ensure operatives are trained to minimise exposures.

Engine lubricant service: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear suitable gloves tested to EN374.

Manual applications e.g. brushing, rolling: Provide extract ventilation to points where emissions occur. If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with type A filter or better. Wear suitable gloves tested to EN374.

Treatment of articles by dipping and pouring: Wear suitable gloves tested to EN374.

Spraying: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. If above technical/organisational control measures are not feasible, then adopt following PPE: Avoid carrying out activities involving exposure for more than 4 hours per day. Wear a respirator conforming to EN140 with type A filter or better. Wear suitable gloves tested to EN374.

Maintenance and machine set-up: Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely. Wear suitable gloves tested to EN374.

Draining equipment (small items) e.g. engine drains: Drain or remove substance from equipment prior to break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Treatment of articles by dipping and pouring: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	72 Tonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	3.6E-3 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.005
Release fraction to soil from process (initial release prior to RMM)	0.05
Release fraction to wastewater from process (initial release prior to RMM)	0.05
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in water treatment agents - Industrial
List of use descriptors	**Identified use name:** Use in water treatment agents - Industrial **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC13 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU10 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC04 **Market sector by type of chemical product:** PC37 **Specific Environmental Release Category:** ESVOC SPERC 9.13c.v1
Processes and activities covered by the exposure scenario	Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature (unless stated differently). Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers to/from storage Closed systems: No specific measures identified.

Drum/batch transfers: Wear suitable gloves tested to EN374.

General exposures (closed systems): No specific measures identified.

General exposures (open systems): Wear suitable gloves tested to EN374.

Manual Pouring from small containers: Wear suitable gloves tested to EN374.

Equipment maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	19.6 ktonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	30 Tonnes/year
Frequency and duration of use:	
Emission days	300 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.05
Release fraction to soil from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	0.95
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	
Treat air emission to provide a typical removal efficiency of	0 %
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of	92.5 %
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.
Additional information	Bund storage facilities to prevent soil and water pollution in the event of spillage.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	UVCB
Code	STI2326
Product name	Renewable hydrocarbons (diesel type fraction)

Section 1: Title

Short title of the exposure scenario	Use in water treatment agents - Professional
List of use descriptors	**Identified use name:** Use in water treatment agents - Professional **Process Category:** PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC13 **Substance supplied to that use in form of:** As such, In a mixture **Sector of end use:** SU22 **Subsequent service life relevant for that use:** No. **Environmental Release Category:** ERC08a, ERC08d, ERC08f **Market sector by type of chemical product:** PC37 **Specific Environmental Release Category:** ESVOC SPERC 8.22b.v1
Processes and activities covered by the exposure scenario	Covers the use of the substance for the treatment of water in open and closed systems.
Assessment Method	See Section 3

Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

Product characteristics:	Vapour pressure: 87.1 Pa
Physical state:	Liquid, vapour pressure < 0.5 kPa. Kinematic Viscosity at 40°C (cSt): <20.5
Concentration of substance in product:	Covers percentage substance in the product up to 100 %. (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure:	Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Drum/batch transfers Dedicated facility: Pumped transfer Wear suitable gloves tested to EN374.

General exposures (closed systems): No specific measures identified.

General exposures (open systems): Wear suitable gloves tested to EN374.

Manual Pouring from small containers: Wear suitable gloves tested to EN374.

Equipment maintenance: Drain down system prior to equipment break-in or maintenance. Wear suitable gloves tested to EN374.

Storage: Store substance within a closed system. Transfer via enclosed lines.

Section 2.2: Control of environmental exposure

Product characteristics:	Readily biodegradable. Solubility in Water: Slight. Vapour pressure: 5.1 Pa. LogKow: 8.4. Not toxic to the environment
Amounts used:	
Regional use tonnage	400 Tonnes/year
Fraction of Regional tonnage used locally	0.1
Annual site tonnage	1.47 Tonnes/year
Frequency and duration of use:	
Emission days	365 days per year
Environment factors not influenced by risk management:	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other conditions affecting environmental exposure:	
Release fraction to air from process (initial release prior to RMM)	0.01
Release fraction to soil from process (initial release prior to RMM)	0
Release fraction to wastewater from process (initial release prior to RMM)	0.99
Conditions and measures related to sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	92.5 %
Assumed on-site sewage treatment plant flow	2000 (m3/d)
Conditions and measures related to external treatment of waste for disposal:	Dispose of waste in accordance with environmental legislation.
Conditions and measures related to external recovery of waste:	Dispose of waste in accordance with environmental legislation.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Petrorisk
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted PNECs and the resulting risk characterisation ratios are expected to be less than 1.

Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	Not available.
Exposure estimation and reference to its source:	When the recommended risk management measures (RMMs) and operational conditions (OCs) are observed, exposures are not expected to exceed the predicted DNELs and the resulting risk characterisation ratios are expected to be less than 1.

Section 4: Guidance to check compliance with the exposure scenario

Environment	Confirm that RMMs and OCs are as described or of equivalent efficiency. The required efficiency removal from water is: 92.5% which would be typically found in waste-water treatment plant.
Health	Confirm that RMMs and OCs are as described or of equivalent efficiency.