SAFETY DATA SHEET

GasOil E10

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

1.1 Product identifier

Product name : GasOil E10

Material uses : Marine fuel

Index number : 649-224-00-6

EC number : 269-822-7

REACH Registration number

Registration number	Legal entity
01-2119484664-27	-

CAS number : 68334-30-5

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

Identified uses
Manufacture of substance Distribution of substance Formulation and (re)packing of substances and mixtures Use in fuel Use in fuel - Consumer

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor : ScanOcean AB
Styrmansgatan 4
114 54 Stockholm
Sweden
Tel. +46 8 555 726 50

e-mail address of person responsible for this SDS : bunker@scanocean.se

1.4 Emergency telephone number

Europe : +44 (0) 1235 239 670

Global (English only) : +44 (0) 1865 407 333

CARECHEM24

National advisory body/Poison Center

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]

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Flam. Liq. 3, H226
Acute Tox. 4, H332
Skin Irrit. 2, H315
Carc. 2, H351 (dermal)
STOT RE 2, H373 (dermal)
STOT RE 2, H373 (inhalation)
Asp. Tox. 1, H304
Aquatic Chronic 2, H411

SECTION 2: Hazards identification

Ingredients of unknown toxicity : None.

Ingredients of unknown ecotoxicity : None.

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

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

2.2 Label elements

Hazard pictograms :

Signal word : Danger

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

Precautionary statements

Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

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

Storage : P235 - Keep cool.

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

Hazardous ingredients : Fuels, diesel

Supplemental label elements : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : Not available.

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not available.

SECTION 2: Hazards identification

Other hazards which do not result in classification : Hazardous concentrations of hydrogen sulphide (H2S) gas may accumulate in the vapour space of storage vessels. Standard procedures for opening or entering tanks, vessels or other containers must strictly be followed to avoid inhalation of this acutely toxic gas.

SECTION 3: Composition/information on ingredients

3.1 Substances : UVCB

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Fuels, diesel	REACH #: 01-2119484664-27 EC: 269-822-7 CAS: 68334-30-5 Index: 649-224-00-6	100	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Carc. 2, H351 (dermal) STOT RE 2, H373 (dermal) STOT RE 2, H373 (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 **See Section 16 for the full text of the H statements declared above.**	[A]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[*] Substance
[A] Constituent
[B] Impurity
[C] Stabilizing additive

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If exposure to hydrogen sulphide is suspected or cannot be excluded, obtain medical attention IMMEDIATELY. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

SECTION 4: First aid measures

Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapor. 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. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
Hydrogen sulphide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
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 (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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. Empty containers retain product residue and can be hazardous. Do not reuse container. Hazardous concentrations of hydrogen sulphide (H2S) gas may accumulate in the vapour space of storage vessels. Standard procedures for opening or entering tanks, vessels or other containers must strictly be followed to avoid inhalation of this acutely toxic gas.

SECTION 7: Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. 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 original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing 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. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Provide adequate ventilation.

Seveso Directive - Reporting thresholds (in tonnes)

Named substances

Name	Notification and MAPP threshold	Safety report threshold
Petroleum products and alternative fuels (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams) (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2500	25000

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

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.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. Product may release hydrogen sulphide: a specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water and unintentional releases should be made to help determine controls appropriate to local circumstances.

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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Wear suitable gloves tested to EN374. Recommended: < 1 hour (breakthrough time): nitrile rubber 0.17 mm.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2.

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. [Oily liquid.]

Appearance : Clear.

Color : Green. [Light]

Odor : Characteristic.

SECTION 9: Physical and chemical properties

Odor threshold	:	Not available.
pH	:	7
Melting point/freezing point	:	<0°C
Initial boiling point and boiling range	:	150 to 390°C
Flash point	:	Closed cup: >60°C [ASTM D93.]
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not applicable.
Upper/lower flammability or explosive limits	:	Lower: 1% Upper: 6%
Vapor pressure	:	0.4 kPa [room temperature]
Vapor density	:	Not available.
Relative density	:	0.84
Solubility(ies)	:	Insoluble in the following materials: cold water and hot water.
Dispersibility properties	:	Very slightly dispersible in the following materials: hot water. Not dispersible in the following materials: cold water.
Partition coefficient: n-octanol/ water	:	3 to 6
Auto-ignition temperature	:	>220°C
Decomposition temperature	:	>220°C
Viscosity (40°C)	:	3 cSt
Explosive properties	:	Not applicable.
Oxidizing properties	:	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

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.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

10.6 Hazardous decomposition products : Decomposition products may include the following materials: sulfur oxides
Hydrogen sulphide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel	LC50 Inhalation Dusts and mists LD50 Oral	Rat Rat	4.1 mg/l 7500 mg/kg	4 hours -

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Fuels, diesel	Skin - Severe irritant Skin - Severe irritant	Rabbit Rabbit	- -	24 hours 500 microliters 240 hours 80 Grams	- -

Conclusion/Summary : Not available.

Sensitization

Conclusion/Summary : Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Fuels, diesel	471 Bacterial Reverse Mutation Test	Subject: Bacteria Cell: Germ	Positive

Conclusion/Summary : Not available.

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel	Positive - Dermal - TC	Rat - Male	25 µg/kg	-

Conclusion/Summary : Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Fuels, diesel	Positive	-	Positive	Rat	Dermal: 125 mg/kg	20 days; 7 days per week

Conclusion/Summary : Not available.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel	Positive - Dermal	Rat - Male	125 mg/kg	20 days; 7 days per week

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Fuels, diesel	Category 2	Skin Inhalation	Not determined Not determined

Aspiration hazard

SECTION 11: Toxicological information

Product/ingredient name	Result
Fuels, diesel	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Harmful if inhaled.

Skin contact : Causes skin irritation.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel	Sub-chronic NOAEL Dermal	Rat - Male, Female	30 mg/kg	90 days; 5 days per week
	Sub-chronic NOEL Inhalation Dusts and mists	Rat - Male, Female	750 mg/m³	90 days

Conclusion/Summary : Not available.

General : May cause damage to organs through prolonged or repeated exposure if inhaled or in contact with skin.

Carcinogenicity : Suspected of causing cancer in contact with skin. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : 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.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Fuels, diesel	Acute EC50 210 mg/l Fresh water Acute EC50 65 mg/l Fresh water	Daphnia Fish	48 hours 96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Fuels, diesel	301E Ready Biodegradability - Modified OECD Screening Test	60 % - Readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Fuels, diesel	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Fuels, diesel	3 to 6	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not available.

P: Not available. B: Not available. T: Yes.

vPvB : Not available.

vP: Not available. vB: Not available.

12.6 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 : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

SECTION 13: Disposal considerations

Waste code	Waste designation
13 07 01*	fuel oil and diesel

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Packaging :

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1202	UN1202	UN1202	UN1202
14.2 UN proper shipping name	GAS OIL	GAS OIL	GAS OIL	Gas oil
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Hazard identification number** 30 **Limited quantity** 5 L **Special provisions** 640M, 363 **Tunnel code** (D/E)	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Special provisions** 363, 640M	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-E, S-E **Special provisions** 363	The environmentally hazardous substance mark may appear if required by other transportation regulations. **Passenger and Cargo Aircraft** Quantity limitation: 60 L Packaging instructions: 355 **Cargo Aircraft Only** Quantity limitation: 220 L Packaging instructions: 366 **Limited Quantities - Passenger Aircraft** Quantity limitation: 10

SECTION 14: Transport information

				L Packaging instructions: Y344 **Special provisions** A3

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

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 authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Other EU regulations

Europe inventory : This material is listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Named substances

Name
Petroleum products and alternative fuels (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams) (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)

NACE : Not available.

UC62 : Not available.

Hazard class for water (WGK) : 2 Appendix No. 2

VOC content : VOC (w/w): 100%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

SECTION 15: Regulatory information

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	:	This material is listed or exempted.
Canada	:	This material is listed or exempted.
China	:	This material is listed or exempted.
Japan	:	**Japan inventory (ENCS)**: Not determined. **Japan inventory (ISHL)**: Not determined.
Malaysia	:	Not determined.
New Zealand	:	This material is listed or exempted.
Philippines	:	This material is listed or exempted.
Republic of Korea	:	This material is listed or exempted.
Taiwan	:	This material is listed or exempted.
Turkey	:	This material is listed or exempted.
United States	:	This material is listed or exempted.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	On basis of test data
Skin Irrit. 2, H315	On basis of test data
Carc. 2, H351 (dermal)	On basis of test data
STOT RE 2, H373 (dermal)	On basis of test data
STOT RE 2, H373 (inhalation)	On basis of test data
Asp. Tox. 1, H304	On basis of test data
Aquatic Chronic 2, H411	On basis of test data

Full text of abbreviated H statements

SECTION 16: Other information

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

Full text of classifications [CLP/GHS]

Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Chronic 2, H411	AQUATIC HAZARD (LONG-TERM) - Category 2
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Carc. 2, H351 (dermal)	CARCINOGENICITY (dermal) - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
STOT RE 2, H373 (dermal)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (dermal) - Category 2
STOT RE 2, H373 (inhalation)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 2

Training advice : Ensure operatives are trained to minimise exposures.

Date of printing : 01-12-2017

Date of issue/ Date of revision : 01-06-2017

Date of previous issue : 04-06-2015

Version : 1.02

Prepared by : ScanOcean AB

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : GasOil E10

Section 1 Title

Short title of the exposure scenario : Manufacture of Gas Oils (vacuum, hydrocracked & distillate fuels) H304/non-H304, H315, H332, H351, H373, H411 - Industrial

List of use descriptors :
Identified use name: Manufacture of substance
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU03, SU08, SU09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01, ESVOC SPERC 1.1.v1
Market sector by type of chemical product: PC13
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Manufacture of the substance or use as a process chemical or extraction agent within closed or contained systems. Includes incidental exposures during 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 consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours

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

General measures applicable to all activities: Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance.
Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

General measures (skin irritants): Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

General exposures (closed systems): Handle substance within a closed system.

Section 2 Operational conditions and risk management measures

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

Process sampling: No other specific measures identified.

Bulk closed loading and unloading: Handle substance within a closed system. Wear suitable gloves tested to EN374.

Bulk open loading and unloading: Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Laboratory activities: No other specific measures identified.

Bulk product storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 2.8E7 Fraction of regional tonnage used locally 0.021 Annual site tonnage 6.0e5 Maximum daily site tonnage 2.0e6
Frequency and duration of use	:	Continuous release Emission days 300
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-2 Release fraction to wastewater from process (initial release prior to RMM) 3.0E-5 Release fraction to soil from process (initial release prior to RMM) 0.0001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. On-site wastewater treatment required. 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 90.3 If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0
Organizational measures to prevent/limit release from site	:	Prevent discharge of undissolved substance to or recover from onsite wastewater. Do not apply industrial sludge to natural soils. Sewage 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 94.1 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs 94.1 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.3E6 Assumed on-site sewage treatment plant flow 10000
Conditions and measures related to external treatment of waste for disposal	:	During manufacturing, no waste of the substance is generated.
Conditions and measures related to external recovery of waste	:	During manufacturing, no waste of the substance is generated.

Contributing scenarios: Operational conditions and risk management measures

Section 2 Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE : Not available.

Section 3.2: Environment

Exposure assessment (environment): : Hydrocarbon Block Method (Petrorisk)

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE : Not available.

Section 4 Guidance to check compliance with the exposure scenario

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

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SPERC factsheet. Scaled local assessments for EU refineries have been performed using site-specific data and are attached in PETRORISK file - "Site-Specific Production" worksheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : GasOil E10

Section 1 Title

Short title of the exposure scenario : Distribution of Gas Oils (vacuum, hydrocracked & distillate fuels) H304/non-H304, H315, H332, H351, H373, H411 - Industrial

List of use descriptors :
Identified use name: Distribution of substance
Process Category: PROC04, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01, ERC02, ERC03, ERC04, ERC05, ERC06a, ERC06b, ERC06c, ERC06d, ERC07, ESVOC SPERC 1.1b.v1
Market sector by type of chemical product: PC13
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Bulk loading (including marine vessel/barge, rail/road car and IBC loading) of substance within closed or contained systems, including incidental exposures during its sampling, storage, unloading, maintenance and associated laboratory activities.

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

Physical state : liquid, With potential for aerosol generation.
Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours

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

General measures applicable to all activities: Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance.
Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

General measures (skin irritants): Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

General exposures (closed systems): Handle substance within a closed system.

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

Section 2 Operational conditions and risk management measures

Process sampling: No other specific measures identified.

Laboratory activities: No other specific measures identified.

Bulk closed loading and unloading: Handle substance within a closed system. Wear suitable gloves tested to EN374.

Bulk open loading and unloading: Wear suitable gloves tested to EN374.

Drum and small package filling: Wear suitable gloves tested to EN374.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Bulk product storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 2.8E7 Fraction of regional tonnage used locally 0.002 Annual site tonnage 5.6E4 Maximum daily site tonnage 1.9E5
Frequency and duration of use	:	Continuous release Emission days 300
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-3 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-6 Release fraction to soil from process (initial release prior to RMM) 0.00001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by humans via indirect exposure (primarily ingestion). Prevent discharge of undissolved substance to or recover from onsite wastewater. No wastewater treatment required. 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 0 If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0
Organizational measures to prevent/limit release from site	:	Prevent discharge of undissolved substance to or recover from onsite wastewater. Do not apply industrial sludge to natural soils. Sewage 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 94.1 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs 94.1 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 2.9E6 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE : Not available.

Section 3.2: Environment

Exposure assessment (environment): : Hydrocarbon Block Method (Petrorisk)

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE : Not available.

Section 4 Guidance to check compliance with the exposure scenario

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

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SPERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : GasOil E10

Section 1 Title

Short title of the exposure scenario : Formulation & (Re)packing of Gas Oils (vacuum, hydrocracked & distillate fuels) H304/non-H304, H315, H332, H351, H373, H411 - Industrial

List of use descriptors : **Identified use name:** Formulation and (re)packing of substances and mixtures
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ESVOC SPERC 2.2.v1
Market sector by type of chemical product: PC13
Article category related to subsequent service life: Not applicable.

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 consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours

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 measures applicable to all activities: Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance.
Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

General measures (skin irritants): Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

General exposures (closed systems): Handle substance within a closed system.

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

Section 2 Operational conditions and risk management measures

Batch processes at elevated temperatures: Provide extract ventilation to points where emissions occur.

Process sampling: No other specific measures identified.

Drum/batch transfers: Use drum pumps or carefully pour from container. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

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

Mixing operations (open systems): Provide extract ventilation to points where emissions occur. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

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

Drum and small package filling: Wear suitable gloves tested to EN374.

Laboratory activities: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region0.1 Regional use tonnage2.8E7 Fraction of regional tonnage used locally0.0011 Annual site tonnage3.0E4 Maximum daily site tonnage1.0E5
Frequency and duration of use	:	Continuous release Emission days300
Environment factors not influenced by risk management	:	Local freshwater dilution factor10 Local marine water dilution factor100
Other conditions affecting environmental exposure	:	Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements)1.0E-2 Release fraction to wastewater from process (initial release prior to RMM)2.0E-5 Release fraction to soil from process (initial release prior to RMM)0.0001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. 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 59.9 If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0
Organizational measures to prevent/limit release from site	:	Prevent discharge of undissolved substance to or recover from onsite wastewater. Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

Section 2 Operational conditions and risk management measures

Conditions and measures related to sewage treatment plant	:	Estimated substance removal from wastewater via on-site sewage treatment 94.1 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs 94.1 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 6.8E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	:	Not available.

Section 3.2: Environment

Exposure assessment (environment):	:	Hydrocarbon Block Method (Petrorisk)
EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE	:	Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SPERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : GasOil E10

Section 1 Title

Short title of the exposure scenario : Uses of Gas Oils (vacuum, hydrocracked & distillate fuels) H304/non-H304, H315, H332, H351, H373, H411as a Fuel - Professional

List of use descriptors :
Identified use name: Use in fuel
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SPERC 9.12b.v1
Market sector by type of chemical product: PC13
Article category related to subsequent service life: Not applicable.

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

Physical state : liquid , With potential for aerosol generation.
Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours

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 measures applicable to all activities: Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance.
Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

General measures (skin irritants): Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Bulk transfers: Wear suitable gloves tested to EN374.

Drum/batch transfers: Use drum pumps or carefully pour from container. Wear suitable gloves tested to EN374.

Refuelling: Wear suitable gloves tested to EN374.

Section 2 Operational conditions and risk management measures

Use in fuel (Closed system): Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). or Ensure operation is undertaken outdoors.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 6.7E6 Fraction of regional tonnage used locally 0.0005 Annual site tonnage 3.3E3 Maximum daily site tonnage 9.2E3
Frequency and duration of use	:	Continuous release Emission days 365
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 wide dispersive use (regional only) 1.0E-4 Release fraction to wastewater from wide dispersive use 0.00001 Release fraction to soil from wide dispersive use (regional only) 0.00001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by humans via indirect exposure (primarily ingestion). No wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 0 If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0
Organizational measures to prevent/limit release from site	:	Prevent discharge of undissolved substance to or recover from onsite wastewater. Do not apply industrial sludge to natural soils. Sewage 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 94.1 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs 94.1 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.4E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE : Not available.

Section 3.2: Environment

Exposure assessment (environment): : Hydrocarbon Block Method (Petrorisk)

EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Risk management measures are based on qualitative risk characterisation.

Available hazard data do not support the need for a DNEL to be established for other health effects. Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SPERC factsheet. Scaled local assessments for EU refineries have been performed using site-specific data and are attached in PETRORISK file - "Site-Specific Production" worksheet.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : GasOil E10

Section 1 Title

Short title of the exposure scenario : Uses of Gas Oils (vacuum, hydrocracked & distillate fuels) H304/non-H304, H315, H332, H351, H373, H411as a Fuel - Consumer

List of use descriptors : **Identified use name:** Use in fuel - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SPERC 9.12c.v1
Market sector by type of chemical product: PC13
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers consumer uses in liquid fuels.

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

Physical state : Liquid, vapor pressure > 10 kPa at Standard Temperature and Pressure

Amounts used : For each use event, covers use amounts up to 37500 g. Covers skin contact area up to 420 cm². (Unless otherwise stated)

Frequency and duration of use/exposure : Unless otherwise stated, Covers use up to 0.143 uses per day. For each use event, covers exposure up to 2 hours.

Contributing scenarios: Operational conditions and risk management measures

Product categories [PC]: 13 - Fuels Liquid: automotive refuelling
Operations Conditions (consumer): Covers concentrations up to 100 %. Covers use up to 52 days per year. Covers use up to 1 uses per day. Covers skin contact area up to 210.00 cm². For each use event, covers use amounts up to 37500 g. Covers outdoor use. Covers use in room size of 100 m³. For each use event, covers exposure up to 0.05 hours.
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Product categories [PC]: 13 - Liquid: garden equipment - use
Operations Conditions (consumer): Covers concentrations up to 100 %. Covers use up to 26 days per year. Covers use up to 1 uses per day. For each use event, covers use amounts up to 750 g. Covers outdoor use. Covers use in room size of 100 m³. For each use event, covers exposure up to 2.00 hours.
Risk management measures (RMM): No specific risk management measure identified beyond those operational conditions stated.

Product categories [PC]: 13 - Liquid: garden equipment - refuelling
Operations Conditions (consumer): Covers concentrations up to 100 %. Covers use up to 26 days per year. Covers use up to 1 uses per day. Covers skin contact area up to 420.00 cm². For each use event, covers use amounts up to 750 g. 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 0.03 hours.
Risk management measures (RMM): No specific risk management measure identified beyond those operational

Section 2 Operational conditions and risk management measures

conditions stated.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 1.6E7 Fraction of regional tonnage used locally 0.0005 Annual site tonnage 8.2E3 Maximum daily site tonnage 2.3E4
Frequency and duration of use	:	Continuous release Emission days 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other conditions affecting environmental exposure	:	Risk from environmental exposure is driven by humans via indirect exposure (primarily ingestion). Release fraction to air from wide dispersive use (regional only) 1.0E-4 Release fraction to wastewater from wide dispersive use 0.00001 Release fraction to soil from wide dispersive use (regional only) 0.00001
Conditions and measures related to sewage treatment plant	:	Estimated substance removal from wastewater via on-site sewage treatment 94.1 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.5E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	Combustion emissions limited by required exhaust emission controls. Combustion emissions considered in regional exposure assessment.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	ECETOC TRA consumer V3

Section 3.2: Environment

Exposure assessment (environment):	:	Hydrocarbon Block Method (Petrorisk)

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Environment	:	Further details on scaling and control technologies are provided in SPERC factsheet.