

SAFETY DATA SHEET

Marinegasolie



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

1.1 Product identifier

Product name : Marinegasolie
Viscosity or Type : Q8 Bunkergasolie, Q8 Marinegasolie

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

Material uses : Diesel fuel for marine applications

Identified uses

Formulation and (re)packing of substances and mixtures
Use in fuel; Industrial
Use in fuel; Professional
Use in fuel; Consumer

1.3 Details of the supplier of the safety data sheet

Supplier : Q8 Danmark A/S
Arne Jacobsens Allé 17
2300 København S, Danmark
Tel.: +45 7012 4545
Email: produktteknik@Q8.dk
Web: www.Q8.dk

Manufacturer / Distributor : Kuwait Petroleum Belgium N.V./S.A. / Q8Oils Italia S.r.l.
Petroleumkaai 7
B-2020 Antwerp
Belgium
Via Volpedo 2
15050 Castellar Guidobono (AL)
Italy

e-mail address of person responsible for this SDS : SDSinfo@Q8.com, communication preferably in English only.

PCN Information contact : PCNinfo@Q8.com, communication preferably in English only.

1.4 Emergency telephone number

Denmark : +45 8988 2286
Europe : +44 (0) 1235 239 670
Global (English only) : +44 (0) 1865 407 333



National advisory body/Poison Center

Denmark : Bispebjerg Hospital - poison line : +45 8212 1212

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

FLAMMABLE LIQUIDS	Category 3	H226
ACUTE TOXICITY (inhalation)	Category 4	H332
SKIN CORROSION/IRRITATION	Category 2	H315
CARCINOGENICITY	Category 2	H351
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)	Category 2	H373
ASPIRATION HAZARD	Category 1	H304

SECTION 2: Hazards identification

AQUATIC HAZARD (LONG-TERM)

Category 2

H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

Precautionary statements

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

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

Storage : Not applicable.

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.

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 : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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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

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Fuels, diesel	REACH #: 01-2119484664-27 EC: 269-822-7 CAS: 68334-30-5 Index: 649-224-00-6	≥90	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Irrit. 2, H315 Carc. 2, H351 (dermal) STOT RE 2, H373 (bone marrow, liver, thymus) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	ATE [Inhalation (vapours)] = 11 mg/l	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

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** : Flush contaminated skin with plenty of 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. 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. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

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SECTION 4: First aid measures

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, CO₂, 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. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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.

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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. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c E2	5000 tonne 200 tonne	50000 tonne 500 tonne

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.

Biological exposure indices

No exposure indices known.

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.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Fuels, diesel	DNEL	Long term Oral	1.25 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.25 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.91 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	20.22 mg/ m ³	General population	Systemic

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SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	68.34 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	2572.8 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	0.1027 µg/m ³	Workers	Systemic
	DNEL	Short term Dermal	5.55 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	11.11 mg/kg bw/day	Workers	Systemic

PNECs

No PNECs available.

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

: Do not ingest. If swallowed then seek immediate medical assistance.

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.

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SECTION 8: Exposure controls/personal protection

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. [Oily liquid.]
Appearance : Clear.
Color : Yellow [Light]
Odor : Characteristic.
Odor threshold : Not available.
Melting point/freezing point : <0°C (<32°F) [ASTM 1999]
Initial boiling point and boiling range : 150 to 390°C (302 to 734°F)
Flammability : Not applicable.
Lower and upper explosion limit : Lower: 1%
Upper: 6%
Flash point : Closed cup: >60°C (>140°F) [ASTM D 93]
Auto-ignition temperature : >225°C (>437°F)
Decomposition temperature : >225°C
pH : Not applicable.
Viscosity : Kinematic (40°C (104°F)): <5 mm²/s (<5 cSt) [EN ISO 3104]
Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : Not available.

Partition coefficient: n-octanol/ water : 3 to 6

Vapor pressure : 0.4 kPa (3 mm Hg)

Density : 0.81 to 0.86 g/cm³ [15°C (59°F)] [ASTM D 4052]

Vapor density : Not available.

Explosive properties : Not applicable.

Oxidizing properties : Not applicable.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not applicable.

Oxidizing properties : Not applicable.

9.2.2 Other safety characteristics

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

Acute toxicity

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

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Marinegasolie	N/A	N/A	N/A	11.8	N/A
Fuels, diesel	7500	N/A	N/A	11	N/A

Irritation/Corrosion

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

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.

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SECTION 11: Toxicological information

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental 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	-	bone marrow, liver, thymus

Aspiration hazard

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

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SECTION 11: Toxicological information

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/m ³	90 days

Conclusion/Summary : Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 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	Daphnia	48 hours
	Acute EC50 65 mg/l Fresh water	Fish	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
Marinegasolie	3 to 6	-	High

12.4 Mobility in soil

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

Mobility : Not available.

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SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

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 : 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)





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.

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 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

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SECTION 14: Transport information

14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
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Additional information

- ADR/RID** : 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 640L, 664
Tunnel code (D/E)
- ADN** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 640L
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-E
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 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 Maritime transport in bulk according to IMO instruments : 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.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Marinegasolie	≥90	3

Labeling : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

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SECTION 15: Regulatory information

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c
E2

National regulations

Denmark

Danish fire class : III-1

Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
Fuels, diesel	-	Carc. 2, H351 (dermal)

MAL-code : 00-3

Protection based on MAL : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 00-3

Application: During downtimes, cleaning and repair of closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone.

- Coveralls must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone.

- Arm protectors and apron must be worn.

During all spraying where atomization occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, coveralls and hood must be worn.

SECTION 15: Regulatory information

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc. must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

Restrictions on use : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.

Germany

Hazard class for water (WGK) : 2

Switzerland

VOC content : VOC (w/w): 93%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Eurasian Economic Union : **Russian Federation inventory:** All components are listed or exempted.
Japan : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.
New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Thailand : All components are listed or exempted.
Turkey : All components are listed or exempted.
United States of America : All components are active or exempted.
Viet Nam : All components are listed or exempted.

15.2 Chemical Safety Assessment : Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

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SECTION 16: Other information

Indicates information that has changed from previously issued version.

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
 ASTM = American Society for Testing and Materials
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DIN = German Institute for Standardization
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EC = European Commission
 EC50 = Half maximal effective concentration
 EN = European Standard (Norm)
 EUH statement = CLP-specific Hazard statement
 GHS - Globally Harmonized System of Classification and Labeling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IC50 = Half maximal inhibitory concentration
 IMDG = International Maritime Dangerous Goods
 IMO = International Maritime Organisation
 ISO = International Organization for Standardization
 LC50 = Median lethal concentration
 LD50 = Median lethal dose
 LOAEL / LOAEC = Lowest Observed Adverse Effect Level / Concentration
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 NOAEL / NOAEC = No Observed Adverse Effect Level / Concentration
 NOEL / NOEC = No Observed Effect Level / Concentration
 OECD = Organisation for Economic Co-operation and Development
 OEL = Occupational Exposure Limit
 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
 SDS = Safety Data Sheet
 SVHC = Substances of Very High Concern
 STEL = Short Term Exposure Limit
 TLV = Threshold Limit Value
 TWA = Time Weighted Average
 UFI = Unique Formula Identifier
 UN = United Nations
 VOC = Volatile Organic Compound
 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	Expert judgment
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Carc. 2, H351	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 2, H411	Calculation method

[Full text of abbreviated H statements](#)

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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	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

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

Training advice	: Ensure operatives are trained to minimise exposures.
Date of printing	: 10-01-2024
Date of issue/ Date of revision	: 10-01-2024
Date of previous issue	: 01-09-2023
Version	: 1.08
Prepared by	: Kuwait Petroleum Research & Technology B.V., The Netherlands

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Product name : Marinegasolie

Section 1 - Title

Short title of the exposure scenario : Formulation and (re)packing of substances and mixtures (EC: 269-822-7)
List of use descriptors : **Identified use name:** Formulation and (re)packing of substances and mixtures
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15, PROC28, PROC05, PROC14
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: 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, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.
Additional information	: See section 3.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:	
Product characteristics	: Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	: Fraction of EU tonnage used in region: 0.1 Regional use tonnage (tonnes/year): 2.7E+07 Fraction of regional tonnage used locally: 1.1E-03 Annual site tonnage (tonnes/year): 3.0E+04 Maximum daily site tonnage (kg/day): 1.0E+05
Frequency and duration of use	: Continuous release Emission days (days per year): 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 (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements): 1.0E-02 Release fraction to wastewater from process (initial release prior to RMM): 2.0E-05 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 (%): 0.0E+00 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 92.1 If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of >= (%): 0.0

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Organizational measures to prevent/limit release from site	: Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant	: Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment (%): 94.8 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs (%): 94.8 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): $1.5E+05$ Assumed on-site sewage treatment plant flow (m ³ /d): $2.0E+03$
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 scenario controlling worker exposure for 2:

General measures (skin irritants): Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clean spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

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

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

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

General exposures (closed systems) (PROC_2, PROC_1, PROC_3): Handle substance within a closed system. Sample via a closed loop or other system to avoid exposure.

General exposures (open systems) (PROC_4): Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Batch processes at elevated temperatures; Use in contained systems (PROC_3): Provide extract ventilation to points where emissions occur. Handle substance within a closed system. Assumes process temperature up to 60.0 °C.

Process sampling (PROC_9): Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Laboratory activities (PROC_15): No other specific measures identified. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Put lids on containers immediately after use.

Bulk transfers; Dedicated facility (PROC_8b): Handle substance within a closed system. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Mixing operations (open systems) (PROC_5): Provide extract ventilation to points where emissions occur. Wear

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chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Manual; Transfer from/pouring from containers; Non-dedicated facility (PROC_8a): Use drum pumps. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Drum/batch transfers; Dedicated facility (PROC_8b): Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Tabletting, compression, extrusion or pelletisation (PROC_14): Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Drum and small package filling (PROC_9): Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS.

Equipment cleaning and maintenance (PROC_8a, PROC_28): 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. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Wear suitable coveralls to prevent exposure to the skin.

Storage (PROC_2, PROC_1): Store substance within a closed system.

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

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

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes a good basic standard of occupational hygiene is implemented.
Covers use at ambient temperatures. (unless stated differently)

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

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

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2:

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

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 (http://cefic.org/en/reach-for-industries-libraries.html). Maximum Risk Characterization Ratios for air emissions: 7.1E-01 Maximum Risk Characterization Ratios for waste water emissions: 8.3E-01
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.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Product name : Marinegasolie

Section 1 - Title

Short title of the exposure scenario : Use in fuel; Industrial (EC: 269-822-7)
List of use descriptors : **Identified use name:** Use in fuel; Industrial
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC16, PROC28
Substance supplied to that use in form of: As such
Subsequent service life relevant for that use: No.
Environmental Release Category: ESVOC SPERC 7.12a.v1, ERC07
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.
Additional information : See section 3.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

Product characteristics : Substance is complex UVCB.. Predominantly hydrophobic
Amounts used : Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tonnes/year): 3.4E+06
Fraction of regional tonnage used locally: 4.4E-01
Annual site tonnage (tonnes/year): 1.5E+06
Maximum daily site tonnage (kg/day): 5.0E+06
Frequency and duration of use : Continuous release
Emission days (days per year): 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): 5.0E-03
Release fraction to wastewater from process (initial release prior to RMM): 5.5E-07
Release fraction to soil from process (initial release prior to RMM): 0
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. If discharging to municipal sewage treatment plant, no on-site wastewater treatment required.
Treat air emission to provide a typical removal efficiency of (%): 9.5E+01
Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of >= (%): 94.2
If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of >= (%): 0.0
Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

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Conditions and measures related to sewage treatment plant	: Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via municipal sewage treatment (%): 94.8 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs (%): 94.8 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): $5.5E+06$ Assumed on-site sewage treatment plant flow (m ³ /d): $2.0E+03$
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. External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: This substance is consumed during use and no waste from the substance is generated.

Contributing scenario controlling worker exposure for 2:

General measures (skin irritants): Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clean spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

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

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

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

Bulk transfers; Dedicated facility (PROC_8b): Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37 (4) of REACH do not apply. Ensure no splashing occurs during transfer.

Drum/batch transfers; Dedicated facility (PROC_8b): Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Ensure no splashing occurs during transfer.

General exposures (closed systems) (PROC_2, PROC_1): Handle substance within a closed system. Sample via a closed loop or other system to avoid exposure.

Use in fuel; Closed systems (PROC_16): Handle substance within a closed system.

Equipment cleaning and maintenance (PROC_8a, PROC_28): Drain down and flush system prior to equipment break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Wear suitable coveralls to prevent exposure to the skin. Clean spills immediately.

Storage (PROC_2, PROC_1): Store substance within a closed system.

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

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Physical state	: Liquid. Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure With potential for aerosol generation.
Frequency and duration of use/exposure	: Covers daily exposures up to 8 hours (unless stated differently)
Other conditions affecting workers exposure	: Assumes a good basic standard of occupational hygiene is implemented. Covers use at ambient temperatures. (unless stated differently)

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment):	: Hydrocarbon Block Method (Petrorisk)
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 2:

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

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 (http://cefic.org/en/reach-for-industries-libraries.html). Maximum Risk Characterization Ratios for air emissions RCRair: 1.4E-02 Maximum Risk Characterization Ratios for waste water emissions RCRwater: 9.0E-01
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.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Product name : Marinegasolie

Section 1 - Title

Short title of the exposure scenario : Use in fuel; Professional (EC: 269-822-7)
List of use descriptors : **Identified use name:** Use in fuel; Professional
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC28, PROC16
Substance supplied to that use in form of: As such
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.
Additional information	: See section 3.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:	
Product characteristics	: Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	: Fraction of EU tonnage used in region: 0.1 Regional use tonnage (tonnes/year): 5.3E+06 Fraction of regional tonnage used locally: 5.0E-04 Annual site tonnage (tonnes/year): 2.7E+03 Maximum daily site tonnage (kg/day): 7.3E+03
Frequency and duration of use	: Continuous release Emission days (days per year): 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): 5.0E-03 Release fraction to wastewater from wide dispersive use: 1.0E-06 Release fraction to soil from wide dispersive use (regional only): 0.00025
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. 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 >= (%): 0.0 If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of >= (%): 0.0
Organizational measures to prevent/limit release from site	: Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

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Conditions and measures related to sewage treatment plant	: Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via municipal sewage treatment (%): 94.8 Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs (%): 94.8 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d): $1.7E+05$ Assumed on-site sewage treatment plant flow (m ³ /d): $2.0E+03$
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. External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: This substance is consumed during use and no waste from the substance is generated.

Contributing scenario controlling worker exposure for 2:

General measures (skin irritants): Ensure that direct skin contact is avoided. Identify potential areas for indirect skin contact. Wear suitable gloves tested to EN374. Clean spills immediately. Wash off any skin contamination immediately. For further specification, refer to section 8 of the SDS.

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

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

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

Bulk transfers; Dedicated facility (PROC_8b): Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37 (4) of REACH do not apply. Ensure no splashing occurs during transfer.

Drum/batch transfers; Dedicated facility (PROC_8b): Use drum pumps. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Ensure no splashing occurs during transfer.

Refuelling (PROC_8b): Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply. Ensure no splashing occurs during transfer.

General exposures (closed systems) (PROC_2, PROC_1): Handle substance within a closed system. Sample via a closed loop or other system to avoid exposure.

Use in fuel; Closed systems (PROC_16): Handle substance within a closed system.

Equipment cleaning and maintenance (PROC_8a, PROC_28): Drain down and flush system prior to equipment break-in or maintenance. Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specification, refer to section 8 of the SDS. Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

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Wear suitable coveralls to prevent exposure to the skin. Clean spills immediately.

Storage (PROC_2, PROC_1): Store substance within a closed system.

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

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

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes a good basic standard of occupational hygiene is implemented.
Covers use at ambient temperatures. (unless stated differently)

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

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

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2:

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

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 (<http://cefic.org/en/reach-for-industries-libraries.html>).

Maximum Risk Characterization Ratios for air emissions RCRair: 3.5E-03

Maximum Risk Characterization Ratios for waste water emissions RCRwater: 4.2E-02

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.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Product name : Marinegasolie

Section 1 - Title

Short title of the exposure scenario : Use in fuel; Consumer (EC: 269-822-7)
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.
Additional information	: See section 3.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:	
Product characteristics	: Substance is complex UVCB. Predominantly hydrophobic
Amounts used	: Fraction of EU tonnage used in region: 0.1 Regional use tonnage (tonnes/year): 1.8E+07 Fraction of regional tonnage used locally: 5.0E-04 Annual site tonnage (tonnes/year): 9.1E+0.3 Maximum daily site tonnage (kg/day): 2.5E+04
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: 2.0E-07 Release fraction to soil from wide dispersive use (regional only): 0.00005
Conditions and measures related to sewage treatment plant	: Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via municipal sewage treatment: 94.8 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal: 6.1E+05 Assumed domestic sewage treatment plant flow: 2.0E+0.3
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. External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: This substance is consumed during use and no waste from the substance is generated.

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Contributing scenario controlling consumer exposure for 2:

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

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

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

Fuel; Liquid: automotive refuelling (Diesel) (PC_13) Based on Concawe_SCED_13_3_a:

For each use event, covers use amounts up to 44000.0 g/event

Exposure duration = 0.05 h/event

Outdoor use

Assumes that potential dermal contact is limited to inside hands / one hand / palm of hands.

Fuel; Liquid: garden equipment - use (PC_13) Based on Concawe_SCED_13_4_a:

For each use event, covers use amounts up to 750.0 g/event

Exposure duration= 0.033 h/event

Assumes that potential dermal contact is limited to inside hands / one hand / palm of hands.

Fuel; Liquid: home space heater fuel (PC_13) Based on Concawe_SCED_13_5_a:

For each use event, covers use amounts up to 3320.0 g/event

Exposure duration = 0.033 h/event

Assumes that potential dermal contact is limited to inside hands / one hand / palm of hands.

Concentration of substance in mixture or article : Covers concentrations up to 100%.

Physical state : Liquid

Frequency and duration of use/exposure : Covers use up to 1.0 events per day.

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

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

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Consumers: 2:

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

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.
Maximum Risk Characterization Ratios for air emissions RCRair: 3.0E-03
Maximum Risk Characterization Ratios for waste water emissions RCRwater: 4.1E-02

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