Diesel (ULSD)

Version 2.1 Revision Date. 16.03.2026 Print Date. 23.03.2026

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : Diesel (ULSD)

Product code : 002D7155

Other means of identification : MARPOL annex I category: Gas oils, including ship's bunker

1.2 Identified relevant uses of the substance or mixture and restrictions on use

Recommended use of the chemical and restrictions on use

Recommended use : Fuel for diesel engines used in both on-road and off-road applications.

Restrictions on use :

This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier., This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleanser.

1.3 Details of the supplier of the safety data sheet

Manufacturer or supplier's details

Manufacturer/Supplier : **Shell Eastern Trading (PTE) Ltd**
TOWER 1, THE METROPOLIS
9 NORTH BUONA VISTA DRIVE
#07-01
Singapore 138588
Singapore

Telephone : +65-6384 8000 (Product) ; +65 6314 6314 (LNG)

Telefax :

1.4 Emergency telephone number

Emergency telephone number : +44 (0) 20 7934 7778

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids	:	Category 3 H226: Flammable liquid and vapour.
Aspiration hazard	:	Category 1 H304: May be fatal if swallowed and enters airways.
Skin irritation	:	Category 2 H315: Causes skin irritation.
Acute toxicity (Inhalation)	:	Category 4 H332: Harmful if inhaled.
Carcinogenicity	:	Category 2 H351: Suspected of causing cancer.
Reproductive toxicity	:	Category 1B H360FD: May damage fertility. May damage the unborn child.
Specific target organ toxicity - repeated exposure	:	Category 2 (Blood, thymus, Liver) H373: May cause damage to organs through prolonged or repeated exposure.
Long-term (chronic) aquatic hazard	:	Category 2 H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :

PHYSICAL HAZARDS:
H226 Flammable liquid and vapour.
HEALTH HAZARDS:
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H373 May cause damage to organs (Blood, Liver, thymus) through prolonged or repeated exposure.
ENVIRONMENTAL HAZARDS:
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/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.

Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

May ignite on surfaces at temperatures above auto-ignition temperature. Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature, where vapour concentrations are within the flammability range. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. This product is intended for use in closed systems only.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

3.2 Mixtures

Chemical nature : May also contain several additives at <0.1% v/v each.
: May contain methyl and ethyl esters from lipid sources
: May contain catalytically cracked oils in which polycyclic aromatic compounds, mainly 3-ring but some 4- to 6-ring species are present.

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (% w/w)
Fuels, diesel	68334-30-5	Flam. Liq. 3; H226 Asp. Tox. 1; H304 Acute Tox. 4; H332 Skin Irrit. 2; H315 Carc. 2; H351 Repr. 1B; H360FD STOT RE 2; H373 Aquatic Chronic 2; H411	>= 50 - <= 100
Petroleum diesel/gas oil fraction, co-processed with	Not Assigned	Flam. Liq. 3; H226 Acute Tox. 4; H332	>= 0 - <= 100

renewable hydrocarbons of plant or animal origin		Skin Irrit. 2; H315 Asp. Tox. 1; H304 Carc. 2; H351 STOT RE 2; H373 Aquatic Chronic 2; H411	
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear)	928771-01-1	Flam. Liq. 3; H226 Asp. Tox. 1; H304	>= 0 - <= 50
Renewable hydrocarbons (kerosene type fraction)	1012042-03-3	Flam. Liq. 3; H226 Asp. Tox. 1; H304 EUH066	>= 0 - <= 30
Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear	848301-66-6	Flam. Liq. 3; H226 Asp. Tox. 1; H304 EUH066	>= 0 - <= 25
Distillates (Fischer-Tropsch), C8-26 - Branched and Linear	848301-67-7	Asp. Tox. 1; H304	>= 0 - <= 25
Distillates (Fischer - Tropsch), heavy, C18-50 – branched, cyclic and linear	848301-69-9		>= 0 - <= 20
Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel)	67762-38-3		>= 0 - <= 7
2-ethylhexyl nitrate	27247-96-7	Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH044 EUH066	>= 0 - <= 0,3

Dyes and markers can be used to indicate tax status and prevent fraud.

For explanation of abbreviations see section 16.

Further information

Contains:

Chemical name	Identification number	Concentration (% w/w)
Naphthalene	91-20-3	>= 0 - <= 1

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice	:	Not expected to be a health hazard when used under normal conditions.
If inhaled	:	Call emergency number for your location / facility. Remove to fresh air. Do not attempt to rescue the victim unless proper respiratory protection is worn. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting, or unresponsive, give 100% oxygen with rescue breathing or Cardio-Pulmonary Resuscitation as required and transport to the nearest medical facility.
In case of skin contact	:	Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
In case of eye contact	:	Flush eye with copious quantities of water. Remove contact lenses, if present and easy to do. Continue rinsing. If persistent irritation occurs, obtain medical attention.
If swallowed	:	Call emergency number for your location / facility. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

4.2 Protection of first-aiders

Protection of first-aiders	:	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

4.3 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	:	Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Eye irritation signs and symptoms may include a burning

sensation, redness, swelling, and/or blurred vision.
If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.
Liver damage may be indicated by loss of appetite, jaundice (yellowish skin and eye colour), fatigue, bleeding or easy bruising and sometimes pain and swelling in the upper right abdomen.

Damage to blood-forming organs may be evidenced by: a) fatigue and anaemia (RBC), b) decreased resistance to infection, and/or excessive bruising and bleeding (platelet effect).

Notes to physician : Call a doctor or poison control center for guidance.
Potential for chemical pneumonitis.
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media : Do not use water in a jet.
Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Hazardous combustion products may include:
A complex mixture of airborne solid and liquid particulates and gases (smoke).
Oxides of sulphur.
Unidentified organic and inorganic compounds.
Carbon monoxide may be evolved if incomplete combustion occurs.
Will float and can be reignited on surface water.
Flammable vapours may be present even at temperatures below the flash point.
The vapour is heavier than air, spreads along the ground and distant ignition is possible.

5.3 Recomendations for fire-fighters

Specific extinguishing : Keep adjacent containers cool by spraying with water.

methods		If possible remove containers from the danger zone. If the fire cannot be extinguished the only course of action is to evacuate immediately. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways. Use water spray to cool unopened containers.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Do not breathe fumes, vapour. Do not operate electrical equipment. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area and evacuate all personnel. Attempt to disperse the gas or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas meter.

6.2 Environmental precautions

Environmental precautions	:	Take measures to minimise the effects on groundwater. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.

6.3 Methods and material for containment and cleaning up

Methods and materials for containment and cleaning up	:	Take precautionary measures against static discharges. For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak

up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely
Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Avoid contact with skin, eyes and clothing.
Evacuate the area of all non-essential personnel.
Ventilate contaminated area thoroughly.
Take precautionary measures against static discharges.

Observe all relevant local and international regulations.

6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet., Notify authorities if any exposure to the general public or the environment occurs or is likely to occur., For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet., Local authorities should be advised if significant spillages cannot be contained., Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

General Precautions	:	Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Air-dry contaminated clothing in a well-ventilated area before laundering. Prevent spillages. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Never siphon by mouth. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse.
General Precautions		Maintenance and Fuelling Activities - Avoid inhalation of vapours and contact with skin.
Advice on safe handling	:	Ensure that all local regulations regarding handling and storage facilities are followed. Avoid inhaling vapour and/or mists. Avoid prolonged or repeated contact with skin. When using do not eat or drink. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Earth all equipment.

Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.
The vapour is heavier than air, spreads along the ground and distant ignition is possible.

Avoidance of contact : Strong oxidising agents.

Product Transfer : Avoid splash filling Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Keep containers closed when not in use. Contamination resulting from product transfer may give rise to light hydrocarbon vapour in the headspace of tanks that have previously contained gasoline. This vapour may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

7.2 Conditions for safe storage, including any incompatibilities

Other data : Drum and small container storage:
Drums should be stacked to a maximum of 3 high.
Use properly labeled and closable containers.
Tank storage:
Tanks must be specifically designed for use with this product.
Bulk storage tanks should be diked (bunded).
Locate tanks away from heat and other sources of ignition.
Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat.
Vapours from tanks should not be released to atmosphere.
Breathing losses during storage should be controlled by a suitable vapour treatment system.
The vapour is heavier than air. Beware of accumulation in pits and confined spaces.
Keep container tightly closed and in a cool, well-ventilated

place.
Keep in a cool place.
Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk.
The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.
Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Prevent ingress of water.

Packaging material	:	Suitable material: For containers, or container linings use mild steel, stainless steel. Unsuitable material: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene., Compatibility should be checked with the manufacturer.
Container Advice	:	Do not cut, drill, grind, weld or perform similar operations on or near containers. Containers, even those that have been emptied, can contain explosive vapours.

7.3 Specific end use(s)

Specific use(s)	:	Fuel for diesel engines used in both on-road and off-road applications.
Uses advised against	:	This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier. This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleanser.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Biological occupational exposure limits

No biological limit allocated.

8.2 Exposure controls

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods http://www.cdc.gov/niosh/
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA) , Germany http://www.dguv.de/inhalt/index.jsp
L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil

Engineering measures : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.
Appropriate measures include:
Use sealed systems as far as possible.
Firewater monitors and deluge systems are recommended.
Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.
Local exhaust ventilation is recommended.
Eye washes and showers for emergency use.
General Information
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.
Practice good housekeeping.
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Do not ingest. If swallowed, then seek immediate medical assistance

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection	:	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].
Hand protection Remarks	:	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. When prolonged or frequent repeated contact occurs. Nitrile rubber. For incidental contact/splash protection Neoprene, PVC gloves may be suitable. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye protection	:	If material is handled such that it could be splashed into eyes, protective eyewear is recommended. If a local risk assessment deems it so then chemical splash goggles may not be required and safety glasses may provide adequate eye protection.
Skin and body protection	:	Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.

Thermal hazards : Not applicable

Environmental exposure controls

General advice : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.
Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.
Information on accidental release measures are to be found in section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	Undyed
Odour	:	Hydrocarbon
Odour Threshold	:	Data not available
pH	:	Not applicable
Melting point/freezing point	:	No data available
Pour point		-40 - -10 °C / -40 - 14 °F Method: ASTM D5950
Boiling point/boiling range	:	170 - 390 °C / 338 - 734 °FMethod: Unspecified
Flash point	:	55 - 75 °C / 131 - 167 °F Method: Unspecified
Evaporation rate	:	Data not available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	6 %(V)
Lower explosion limit	:	1 %(V)
Vapour pressure	:	0,4 kPa (38,0 °C / 100,4 °F) Method: Unspecified
		0,6 kPa (50,0 °C / 122,0 °F) Method: Unspecified

Relative vapour density	:	>= 4Method: No information available.
Relative density	:	Data not available
Density	:	820 - 890 kg/m3 (15,0 °C / 59,0 °F) Method: Unspecified
Solubility(ies)		
Water solubility	:	negligible
Solubility in other solvents	:	Data not available
Partition coefficient: n-octanol/water	:	log Pow: ca. 2 - 15
Auto-ignition temperature	:	> 220 °C / 428 °F
Decomposition temperature	:	Data not available
Viscosity		
Viscosity, dynamic	:	Data not available
Viscosity, kinematic	:	Method: Unspecified Not applicable
		1,5 - 6 mm2/s (40,0 °C / 104,0 °F) Method: Unspecified
		Method: Unspecified Not applicable
Particle size	:	Data not available

9.2 Other information

Explosive properties	:	Classification Code: Not classified
Oxidizing properties	:	Not applicable
Conductivity	:	Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10,000 pS/m., Whether a liquid is nonconductive or semiconductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and

anti-static additives can greatly influence the conductivity of a liquid

10. STABILITY AND REACTIVITY

10.1 Reactivity

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

10.2 Chemical stability

Stable under normal use conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazardous reaction is expected when handled and stored according to provisions

10.4 Conditions to avoid

Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.

10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.

10.6 Hazardous decomposition products

: Hazardous decomposition products are not expected to form during normal storage.
Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Basis for assessment	:	Information given is based on product data, a knowledge of the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Information on likely routes of exposure	:	Skin and eye contact are the primary routes of exposure although exposure may occur through inhalation or following accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity	:	LD50 rat: > 5.000 mg/kg Remarks: Low toxicity
Acute inhalation toxicity	:	LC 50 Rat: Exposure time: 4 h Remarks: Harmful if inhaled.
Acute dermal toxicity	:	LD 50 Rabbit: > 2.000 mg/kg Remarks: Low toxicity

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):

Acute oral toxicity	:	LD50 Rat: > 5.000 mg/kg Remarks: Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	LC50 : > 5 mg/l Exposure time: 4 h Remarks: Based on available data, the classification criteria are not met.
Acute dermal toxicity	:	LD50 Rat: > 2.000 mg/kg Remarks: Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):

Acute oral toxicity	:	LD 50 rat: > 5.000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.
Acute inhalation toxicity	:	Rat: > 5 mg/l

Exposure time: 4 h
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Acute dermal toxicity : Rat:
Remarks: LD50 >2000 mg/kg
Low toxicity
Based on available data, the classification criteria are not met.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:

Acute oral toxicity : LD 50 rat: > 5.000 mg/kg
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Acute inhalation toxicity : Rat: > 5 mg/l
Exposure time: 4 h
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Acute dermal toxicity : Rat:
Remarks: LD50 >2000 mg/kg
Low toxicity
Based on available data, the classification criteria are not met.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:

Acute oral toxicity : LD50 Rat: > 5.000 mg/kg
Remarks: Based on available data, the classification criteria are not met.

Acute inhalation toxicity : LC50 Rat: > 5 mg/l
Exposure time: 4 h
Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD50 Rat: > 2.000 mg/kg
Remarks: Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):

Acute oral toxicity :
Remarks: Low toxicity
LD50 > 5000 mg/kg

Acute inhalation toxicity : Remarks: Low toxicity if inhaled.
Based on available data, the classification criteria are not met.

Acute dermal toxicity :
Remarks: LD50 > 5000 mg/kg
Low toxicity
Based on available data, the classification criteria are not met.

Acute toxicity (other routes of administration) :
Remarks: Not a respiratory irritant

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

Fuels, diesel:
Species: Rabbit
Classification: Irritating to skin.
Method: Test(s) equivalent or similar to OECD Test Guideline 404

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Remarks: Not irritating to skin., Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):
Remarks: Slightly irritating to skin., Based on available data, the classification criteria are not met.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Remarks: Slightly irritating to skin., Based on available data, the classification criteria are not met.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Remarks: Not irritating to skin., Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Remarks: Not irritating to skin.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Remarks: Not irritating to eye., Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):
Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Remarks: Slightly irritating to the eye., Based on available data, the classification criteria are not met.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Remarks: Not irritating to eye., Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Remarks: Not irritating to eye.

Respiratory or skin sensitisation

Product:

Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Remarks: Not a sensitiser.
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Product:

Remarks: Positive in in-vitro, but negative in in-vivo mutagenicity assays.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):

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

Remarks: Not mutagenic., Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):

Remarks: Non mutagenic

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:

Remarks: Non mutagenic

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:

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

Remarks: Not mutagenic., Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):

Remarks: Non mutagenic

Carcinogenicity

Product:

Remarks: Limited evidence of carcinogenic effect, Repeated skin contact has resulted in irritation and skin cancer in animals.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):

Remarks: Not a carcinogen., Based on available data, the classification criteria are not met.

Material	GHS/CLP Carcinogenicity Classification
Renewable hydrocarbons (kerosene type fraction)	No carcinogenicity classification.
2-ethylhexyl nitrate	No carcinogenicity classification.
Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear	No carcinogenicity classification.
Distillates (Fischer-Tropsch), C8-26 - Branched and Linear	No carcinogenicity classification.
Naphthalene	CarcinogenicityCategory 2
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear)	No carcinogenicity classification.
Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel)	No carcinogenicity classification.
Fuels, diesel	CarcinogenicityCategory 2
Petroleum diesel/gas oil fraction, co-processed with renewable hydrocarbons of plant or animal origin	CarcinogenicityCategory 2
Distillates (Fischer - Tropsch), heavy, C18-50 – branched, cyclic and linear	No carcinogenicity classification.

Material	Other Carcinogenicity Classification
Naphthalene	IARC: Group 2B: Possibly carcinogenic to humans
Fuels, diesel	IARC: Group 3: Not classifiable as to its carcinogenicity to humans

Reproductive toxicity

Product:

Remarks: Based on available data, the classification criteria are not met., Not a developmental toxicant., Does not impair fertility.

Components:

Fuels, diesel:

Remarks: Causes foetotoxicity at doses which are maternally toxic., Does not impair fertility., Based on available data, the classification criteria are not met.

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):

Remarks: Does not impair fertility., Not a developmental toxicant., Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):

Remarks: Not a developmental toxicant., Based on available data, the classification criteria are not met., Does not impair fertility.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:

Remarks: Not a developmental toxicant., Based on available data, the classification criteria are not met., Does not impair fertility.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:

Remarks: Does not impair fertility., Not a developmental toxicant., Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):

Remarks: Not a developmental toxicant., Based on available data, the classification criteria are not met., Does not impair fertility.

STOT - single exposure

Product:

Remarks: Not classified.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Remarks: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea., Based on available data, the classification criteria are not

met.

Renewable hydrocarbons (kerosene type fraction):
Remarks: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Remarks: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Remarks: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea., Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure

Product:

Target Organs: Blood, thymus, Liver
Remarks: May cause damage to organs or organ systems through prolonged or repeated exposure.

Components:

Fuels, diesel:
Exposure routes: Oral, Dermal
Target Organs: Liver, thymus, Bone marrow
Assessment: May cause damage to organs through prolonged or repeated exposure.

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Remarks: Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction):
Remarks: Based on available data, the classification criteria are not met.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Remarks: Based on available data, the classification criteria are not met.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Remarks: Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Remarks: Based on available data, the classification criteria are not met.

Aspiration toxicity

Product:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

11.2 Information on other hazards

Components:
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Renewable hydrocarbons (kerosene type fraction):
Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Not an aspiration hazard.

Further information

Product:

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Components:
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear):
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Renewable hydrocarbons (kerosene type fraction):
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear:
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear:
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel):
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

12. ECOLOGICAL INFORMATION

Basis for assessment : Information given is based on a knowledge of the components and the ecotoxicology of similar products.
Fuels are typically made from blending several refinery streams. Ecotoxicological studies have been carried out on a variety of hydrocarbon blends and streams but not those containing additives.
Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

12.1 Toxicity

Product:

Toxicity to fish (Acute toxicity) :
Remarks: LL/EL/IL50 > 1 <= 10 mg/l
Toxic

Toxicity to crustacean (Acute toxicity) :
Remarks: LL/EL/IL50 > 1 <= 10 mg/l
Toxic

Toxicity to algae/aquatic plants (Acute toxicity) :
Remarks: LL/EL/IL50 > 1 <= 10 mg/l
Toxic

Toxicity to fish (Chronic toxicity) : Remarks: NOEC/NOEL/EL10 > 0.01 - <=0.1 mg/l

Toxicity to crustacean (Chronic toxicity) : Remarks: NOEC/NOEL/EL10 > 0.1 - <=1.0 mg/l

Toxicity to microorganisms (Acute toxicity) : Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Components:
Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear) :

Toxicity to fish (Acute toxicity) : LL50 : > 1.000 mg/l
Remarks: Based on available data, the classification criteria are not met.

Toxicity to crustacean (Acute toxicity) : LL50 : > 1.000 mg/l
Remarks: Based on available data, the classification criteria

are not met.

Toxicity to algae/aquatic plants (Acute toxicity)	:	LL50 : > 1.000 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	:	LL50 : > 100 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	:	NOEC: 100 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean(Chronic toxicity)	:	NOEC: 32 mg/l Remarks: Based on available data, the classification criteria are not met.

Renewable hydrocarbons (kerosene type fraction) :

Toxicity to fish (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	:	Remarks: NOEC/NOEL/EL10 > 100 mg/l
Toxicity to crustacean(Chronic toxicity)	:	Remarks: NOEC/NOEL/EL10 > 1.0 - <= 10 mg/l

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear :

Toxicity to fish (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.

Toxicity to microorganisms (Acute toxicity)	:	Remarks: LL/EL/IL50 > 100 mg/l Practically non toxic: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	:	Remarks: NOEC/NOEL/EL10 > 100 mg/l
Toxicity to crustacean(Chronic toxicity)	:	Remarks: NOEC/NOEL/EL10 > 10 - <=100 mg/l

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear :

Toxicity to fish (Acute toxicity)	:	LL50 : > 1.000 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Acute toxicity)	:	LL50 : > 1.000 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to algae/aquatic plants (Acute toxicity)	:	LL50 : > 1.000 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	:	LL50 : > 100 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to fish (Chronic toxicity)	:	NOEC: 100 mg/l Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean(Chronic toxicity)	:	NOEC: 32 mg/l Remarks: Based on available data, the classification criteria are not met.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel) :

Toxicity to fish (Acute toxicity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to crustacean (Acute toxicity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to algae/aquatic plants (Acute toxicity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to microorganisms (Acute toxicity)	:	Remarks: Practically non toxic: LL/EL/IL50 > 100 mg/l
Toxicity to fish (Chronic toxicity)	:	Remarks: Data not available
Toxicity to crustacean(Chronic toxicity)	:	Remarks: Data not available

2-ethylhexyl nitrate :

Toxicity to crustacean (Acute toxicity)	:	EC50 (Daphnia magna (Water flea)): 0,83 mg/l Exposure time: 48 h Method: Test(s) equivalent or similar to OECD Guideline 202 Remarks: Very toxic to aquatic organisms.
Toxicity to algae/aquatic plants (Acute toxicity)	:	NOEC (green algae): 0,84 mg/l Exposure time: 72 h Method: Test(s) equivalent or similar to OECD Test Guideline 201 Remarks: Very toxic to algae.

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: Readily biodegradable., Not Persistent per IMO criteria., International Oil Pollution Compensation (IOPC) Fund definition: “A non-persistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50% of which, by volume, distills at a temperature of 340ºC (645ºF) and (b) at least 95% of which, by volume, distils at a temperature of 370ºC (700ºF) when tested by the ASTM Method D-86/78 or any subsequent revision thereof."

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear) :

Biodegradability	:	Remarks: Readily biodegradable.

Renewable hydrocarbons (kerosene type fraction) :

Biodegradability	:	Remarks: Product is not persistent. Not Persistent per IMO criteria. International Oil Pollution Compensation (IOPC) Fund definition: “A non-persistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50% of which, by volume, distills at a temperature of 340ºC (645ºF) and (b) at least 95% of which, by volume, distils at a temperature of 370ºC (700ºF) when tested by the ASTM Method D-86/78 or any subsequent revision thereof."

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear :

Biodegradability	:	Remarks: Product is not persistent. Not Persistent per IMO criteria. International Oil Pollution Compensation (IOPC) Fund definition: “A non-persistent oil is oil, which, at the time of shipment, consists of hydrocarbon fractions, (a) at least 50%

of which, by volume, distills at a temperature of 340ºC (645ºF) and (b) at least 95% of which, by volume, distils at a temperature of 370ºC (700ºF) when tested by the ASTM Method D-86/78 or any subsequent revision thereof."

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear :

Biodegradability : Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: ca. 2 - 15

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear) :
Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Renewable hydrocarbons (kerosene type fraction) :
Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear :
Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear :
Bioaccumulation : Remarks: Contains constituents with the potential to bioaccumulate.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel) :
Bioaccumulation : Remarks: Does not have the potential to bioaccumulate significantly.

12.4 Mobility in soil

Product:

Mobility : Remarks: Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day., If product enters soil, one or more constituents will be mobile and may contaminate groundwater., Large volumes may penetrate soil and could contaminate groundwater., Floats on water.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear) :

Mobility : Remarks: Floats on water., Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day., Large volumes may penetrate soil and could contaminate groundwater.

Renewable hydrocarbons (kerosene type fraction) :

Mobility : Remarks: Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day., Large volumes may penetrate soil and could contaminate groundwater., Floats on water.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear :

Mobility : Remarks: Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day., Large volumes may penetrate soil and could contaminate groundwater., Floats on water.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear :

Mobility : Remarks: Floats on water., Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day., Large volumes may penetrate soil and could contaminate groundwater.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel) :

Mobility : Remarks: If product enters soil, one or more constituents will be highly mobile and may contaminate groundwater.

12.5 Other adverse effects

No data available

Product:

Additional ecological information : Films formed on water may affect oxygen transfer and damage organisms.

Components:

Renewable hydrocarbons, diesel type fraction (Alkanes, C10-20-branched and linear) :

Additional ecological information : Films formed on water may affect oxygen transfer and damage organisms.

Renewable hydrocarbons (kerosene type fraction) :

Additional ecological information : Films formed on water may affect oxygen transfer and damage organisms.

Kerosene (Fischer Tropsch), Full range, C8-C16 branched and linear :

Additional ecological information : Films formed on water may affect oxygen transfer and damage organisms.

Distillates (Fischer-Tropsch), C8-26 - Branched and Linear :

Additional ecological information	:	Films formed on water may affect oxygen transfer and damage organisms.

Fatty acids, C16-18 and C18-unsatd., Me esters (FAME, Biodiesel) :

Additional ecological information	:	Will exert oxygen demand when significant quantities enter watercourses and may cause damage to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand. MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
Contaminated packaging	:	After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Drain container thoroughly. Do not puncture, cut, or weld uncleaned drums. Send to drum recoverer or metal reclaimer. Do not pollute the soil, water or environment with the waste container.

14. TRANSPORT INFORMATION

14.1 UN number or ID number

ADR	:	1202
IMDG	:	1202

IATA : 1202

14.2 UN proper shipping name

ADR : DIESEL FUEL

IMDG : DIESEL FUEL
IATA : DIESEL FUEL

14.3 Transport hazard class(es)

ADR : 3

IMDG : 3
IATA : 3

14.4 Packing group

ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

IMDG
Packing group : III
Labels : 3

IATA
Packing group : III
Labels : 3

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

Additional Information **:** Transport in bulk according to Annex II of Marpol and the IBC Code

15. REGULATORY INFORMATION

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

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

16. OTHER INFORMATION

Full text of H-Statements

EUH044	Risk of explosion if heated under confinement.
EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Asp. Tox.	Aspiration hazard
Carc.	Carcinogenicity
Flam. Liq.	Flammable liquids
Repr.	Reproductive toxicity
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure

Abbreviations and Acronyms : The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

Further information

Training advice : Provide adequate information, instruction and training for

operators.

Other information : This product is intended for use in closed systems only.
A vertical bar (|) in the left margin indicates an amendment from the previous version.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.