SAFETY DATA SHEET

Fuel oil, residual (CAS 68476-33-5)

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	02.12.2019
Revision date	02.10.2023

1.1. Product identifier

Product name	Fuel oil, residual (CAS 68476-33-5)
Synonyms	Heavy fuel oil, LSFO, RMG 380, RME 180, FO 0.5%S, FO 1.0%S
REACH Reg. No.	01-2119474894-22
CAS No.	68476-33-5
EC No.	270-675-6
Extended SDS with ES incorporated	Yes
Extended SDS with ES incorporated, comments	See attachment(-s) in section 16.

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

Product group	Fuel Raw material in the chemical industry
Use of the substance / mixture	Fuel for use in off-road diesel engines, boilers, furnaces and other combustion equipment Use of substace as intermediate Formulation & (re)packing of the substance and mixtures Use in fuel: Industrial Use in fuel; Professional
Uses advised against	Applications that are not registered and risk assessed.

1.3. Details of the supplier of the safety data sheet

Company name	St1 Sverige AB
Postal address	Box 11057

Postcode	SE-161 11
City	Bromma
Country	Sweden
Telephone number	+46 (0) 31 744 6000
Email	Supply-Sweden@st1.se
Website	www.st1.se

1.4. Emergency telephone number

Emergency telephone	Telephone number: 111 (NHS) Description: For poisoning emergencies (UK)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Acute Tox. 4; H332 Carc. 1B; H350 Repr. 2; H361d STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH 066
Substance / mixture hazardous properties	Harmful if inhaled. May cause cancer. Suspected of damaging the unborn child May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking.

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	Fuel oil, residual
Signal word	Danger
Hazard statements	H332 Harmful if inhaled. H350 May cause cancer . H361d Suspected of damaging the unborn child. H373 May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P261 Avoid breathing vapours/mist/spray/gas.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician. P331 Do NOT induce vomiting.
P308+P313 IF exposed or concerned: Get medical advice / attention.
P391 Collect spillage.

Supplemental label information

EUH 066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

PBT / vPvB

The substance does not meet current criteria for PBT (Persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).

Physicochemical effects

Not classified as flammable but combustible.
Flammable vapours may be present even at temperatures below flash point. Therefore the liquid should be treated as potentially flammable. May ignite on surfaces at temperatures above auto-ignition temperature. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Hydrogen sulphide, an extremely flammable and toxic gas, and other hazardous vapours may evolve and collect in the headspace of storage tanks, transport vessels and other enclosed containers.

Health effect

Hydrogen sulphide (H2S) is highly toxic and may be fatal if inhaled. The gas may dull the sense of smell and has a high odour threshold, so do not rely on odour as an indication of hazard. Contact with hot material can cause thermal burns which may result in permanent skin damage.

Other hazards

The substance is not known or suspected to be endocrine disrupting.

SECTION 3: Composition / information on ingredients

3.1. Substances

Substance	Identification	Classification	Contents	Notes
Fuel oil, residual	CAS No.: 68476-33-5 EC No.: 270-675-6 REACH Reg. No.: 01-2119474894-22	Acute Tox. 4; H332 Carc. 1B; H350 Repr. 2; H361d STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH 066	≤ 100 %	

Remarks, substance

Composition is complex and varies with the source of the crude oil.
Heavy Fuel Oils are blends of residual fuels and distillate streams which always require heating before use.
Streams obtained from distillation and cracking processes and containing a mixture of saturated, aromatic and olefinic hydrocarbons with carbon numbers predominantly in the C9 to C50 range. Contains cracked components in which

polycyclic aromatic compounds, mainly 3-ring but some 4 to 6 ring species, are present.
Contains sulphur, oxygen, nitrogen compounds, vanadium and other metals at > 10 ppm w/w.
Contains hydrogen sulphide, CAS 7783-06-4.
Hydrogen sulphide may be present both in the liquid and the vapour.

Substance comments

ATE Inhalation: > 1,0 ≤ 5,0 mg/
See section 16 for explanation of hazard statements (H) listed above.

SECTION 4: First aid measures

4.1. Description of first aid measures

General

Emergency telephone number: see section 1.4. If medical advice is needed, have safety data sheet or label available at hand.
Vaporisation of H2S that has been trapped in clothing can be dangerous to rescuers. Maintain respiratory protection to avoid contamination from the victim to rescuer.
Mechanical ventilation should be used to resuscitate if at all possible.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Do not attempt to rescue the victim unless proper respiratory protection against H2S is worn.
If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting, or unresponsive, give 100% oxygen.
Perform CPR if needed and call for an ambulance.

Skin contact

Cold product:
Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Hot product:
Cool the burn area by flushing with large amounts of water. Do not attempt to remove anything from the burn area or apply burn creams or ointments.
Cover the burn area loosely with a sterile dressing, if available. Transport to the nearest medical facility for additional treatment.

Eye contact

Cold product:
Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Hot product:
Cool the burn area by flushing with large amounts of water. Do not attempt to remove anything from the burn area or apply burn creams or ointments. Cover the burn area loosely with a sterile dressing, if available. Transport to the nearest medical facility for additional treatment.

Ingestion

Rinse mouth thoroughly. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Acute symptoms and effects

Inhalation: At low concentrations of H2S (≤ 10 ppm), the gas appears irritating to the airways.
Headache, nausea, dizziness, unsteady gait and diarrhea (≤100 ppm). At 200 ppm potential for pulmonary oedema after > 20-30 minutes.
At higher concentrations of H2S (about 500 ppm), the respiratory center is paralyzed and can cause death within a few seconds.
Exposure to non-lethal levels can cause long-term or permanent nerve damage or pulmonary edema.
Eye contact: Causes irritation upon eye-contact and may cause watering, burning and redness. After contact with hydrogen sulphide typically so-called "gas eye" may appear, which is an experience of seeing colored rings around lights.

Delayed symptoms and effects

Repeated exposure may cause skin dryness or cracking.
May cause damage to organs (blood, thymus, liver) through prolonged or repeated exposure .
Suspected of damaging the unborn child

4.3. Indication of any immediate medical attention and special treatment needed

Medical monitoring for delayed effects

Monitor for consciousness, circulation and breathing.
Monitor for signs of an arrhythmia.

Specific details on antidotes

Correction of metabolic acidosis.
In case of severe CNS or circulatory effects, 200 ml of sodium bicarbonate is given immediately, 50 mg/ml iv (adult).
CALL POISON INFORMATION CENTER.

Other information

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of major fire and large quantities: Foam. Water spray, fog or mist.
Small fires: Powder. Carbon dioxide (CO2).
Sand or earth are suitable in small fires.

Improper extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.
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

Fire and explosion hazards

Combustible liquid. To be treated as a potentially flammable liquid.
Hydrogen sulphide (H2S) and toxic sulphur oxides may be released when this material is heated.
Static accumulator: This product may accumulate static electricity. Electrostatic discharge may cause fire.
Can form explosive gas-air mixtures. Vapours are heavier than air and may spread near ground to sources of ignition. May travel considerable distance to source of ignition and flash back.

Hazardous combustion products

May include, but is not limited to:

Carbon dioxide (CO2). Carbon monoxide (CO). Hydrocarbons. Unspecified organic compounds. Oxides of sulphur (SOx). Hydrogen sulphide (H2S).

5.3. Advice for firefighters

Personal protective equipment Firefighters who may be exposed to smoke or thermal decomposition products shall wear all available personal protective equipment (PPE) and SCBA mask.

Other information If there is no risk involved, move the containers to a safe place. If not possible, cool with water from a safe position.
Extinguishing water must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures Evacuate area. Provide adequate ventilation.
Stop leak if safe to do so. Eliminate all ignition sources if safe to do so.
Test atmosphere for hazardous gas concentrations to ensure safe working conditions before personnel are allowed to enter the area. Monitor area with combustible gas meter.

Personal protection measures Avoid any exposure. Put on protective equipment before entering danger area.
For personal protection, see section 8.

6.2. Environmental precautions

Environmental precautionary measures Do not allow to enter into sewer, water system or soil.
Immediately notify the local authorities about any damage.

6.3. Methods and material for containment and cleaning up

Clean up Remove ignition sources and work with non-sparking tools.
Small Spillages: (< 1 drum)
Collect with absorbent, non-combustible material into suitable containers.
Proposals for inert materials: sand, kieselguhr, universal binder.
Collect in a suitable container and dispose as hazardous waste according to section 13.
Large Spillages:
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.

6.4. Reference to other sections

Other instructions See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling Heavy fuel oils are blends of residual fuels and distillate streams which always

require heating before use.
Provide adequate ventilation. Local exhaust is recommended.
Air monitoring alarms are needed to monitor concentrations of H2S i air in enclosed spaces, heated transport vessels and in spill or leak situations.
Avoid inhalation of vapours and contact with skin and eyes. Use protective equipment as referred to in section 8.
Contaminated rags and cloths must be put in fireproof containers for disposal.
Risk of vapour concentration on the floor and in low-lying areas. Risk for slippery floors and tools if spilled out.
Pregnant women should not work with the product, if there is the least risk of exposure.

Protective safety measures

Safety measures to prevent fire

Smoking and naked flames and other ignition sources are prohibited.
Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Apply also to emptied containers, that may contain explosive vapours.
Take precautionary measures against static discharges.
Ground / bond container and receiving equipment.
Use only non-sparking tools.
Use explosion-proof electrical / ventilating / lighting / / equipment.

Advice on general occupational hygiene

Do not eat, drink or smoke during work. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Drum and small container storage:
Drums should be stacked to a maximum of 3 high. Use properly labelled and closeable containers. Prevent ingress of water.

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. Tanks should be fitted with heating coils. Ensure heating coils are always covered with product (minimum 15 cm).

Conditions for safe storage

Packaging compatibilities

Recommended materials:
For containers, or container linings use mild steel, stainless steel. Aluminium may also be used for applications where it does not present an unnecessary fire hazard.
Other suitable materials are:
High density polyethylene (HDPE) and Viton (FKM).
For container linings, use amine-adduct cured epoxy paint.
For seals and gaskets use: graphite, PTFE, Viton A, Viton B.

Unsuitable materials:
Natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC),

polyisobutylene.
However, some may be suitable for glove materials.

Advice on storage compatability

Keep away from:
Strong oxidizing agents. Food and feed.

7.3. Specific end use(s)

Specific use(s)

See section 1.2.
See exposure scenario.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Hydrogen sulphide	CAS No.: 7783-06-4	Limit value (8 h) : 5 ppm Limit value (8 h) : 7 mg/m³ **Limit value (short term)** Value: 10 ppm **Limit value (short term)** Value: 14 mg/m³	

Other Information about threshold limit values

References (laws/regulations): Swedish regulation on exposure limits: Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden, ”Hygieniska gränsvärden”, AFS 2018:1

DNEL / PNEC

DNEL

Group: Professional
Route of exposure: Acute inhalation (systemic)
Value: 4700 mg/m³
Reference: 15 minutes. (aerosol)
Comments: Applies to Fuel oil, residual.

Group: Professional
Route of exposure: Long-term inhalation (systemic)
Value: 0,12 mg/m³
Reference: 8 h. (aerosol)
Comments: Applies to Fuel oil, residual.

Group: Professional
Route of exposure: Long-term dermal (systemic)
Value: 0,065 mg/kg
Reference: 8 h.
Comments: Applies to Fuel oil, residual.

Group: Consumer
Route of exposure: Long-term oral (systemic)
Value: 0,015 mg/kg bw/day
Comments: Applies to Fuel oil, residual.

PNEC

Comments: Substance is a hydrocarbon with a complex, unknown or variable

composition. Conventional methods of deriving PNECs are not appropriate and it is not possible to identify a single representative PNEC for such substances.

DMEL Comments: No data available

8.2. Exposure controls

Precautionary measures to prevent exposure

Technical measures to prevent exposure

Explosion-proof general and local exhaust ventilation.
Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.
EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values.
The personal protective equipment must be CE-marked and the latest version of the standards shall be used. The protective equipment and the specified standards recommended below are only suggestions, and should be selected on advice from the supplier of such equipment.
A risk assessment of the work place/work activities (the actual risk) may lead to other control measures. The protection equipment's suitability and durability will depend on application.

Eye / face protection

Eye protection equipment

Description: Wear approved chemical safety goggles where eye exposure is reasonably probable.
Reference to relevant standard: EN ISO 16321-1:2022 (Eye and face protection for occupational use - Part 1: General requirements).

Additional eye protection measures

Eye wash facilities should be available at the work place. Either a fixed eye wash facility connected to the drinking water (preferably warm water) or a portable disposable unit.

Hand protection

Suitable materials

Nitrile.
For incidental contact/splash protection, Neoprene, PVC gloves may be suitable.

Breakthrough time Comments: Nitrile: > 240 minutes.

Thickness of glove material Comments: Glove thickness must be chosen in consultation with the glove supplier.

Hand protection equipment

Description: Use protective gloves that are suitable for the application. The gloves abilities may vary among the different glove manufacturers.
Reference to relevant standard: EN ISO 374 (Protective gloves against chemicals and micro-organisms).
EN ISO 21420:2020 (Protective gloves - General requirements and test methods).

Additional hand protection measures

Gloves must only be worn on clean, dry hands.
Wash promptly with soap & water if skin becomes contaminated.

Skin protection

Recommended protective clothing

Description: At risk of splashing:
Wear impervious protective clothing, gloves, apron and boots.

Additional skin protection measures	Emergency shower should be available at the workplace. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Wash contaminated clothing before reuse.

Respiratory protection

Recommended respiratory protection	Description: In case of inadequate ventilation: Mask with filter ABE. At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used. Reference to relevant standard: EN 14387 (Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking). BS EN 137:2006. Respiratory protective devices. Self-contained open-circuit compressed air breathing apparatus with full face mask.

Appropriate environmental exposure control

Environmental exposure controls	Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Do not allow to enter into sewer, water system or soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Viscous liquid.
Colour	Brown. / Black.
Odour	Hydrocarbon.
Odour limit	Comments: Data lacking.
pH	Comments: Not relevant.
Melting point / melting range	Value: < 30 °C
Boiling point / boiling range	Value: 150 - 750 °C
Flash point	Value: > 60 °C
Flammability	Not relevant.
Explosion limit	Value: 0,50 - 5,0 vol%
Vapour pressure	Value: 0,2 - 7,91 hPa Temperature: 37,8 °C
Vapour density	Value: > 1 Comments: Air=1.
Particle characteristics	Comments: Not relevant for liquids.
Density	Value: ≤ 991 kg/m³ Temperature: 15 °C
Solubility	Medium: Water Comments: Ignorable.

Partition coefficient: n-octanol/ water	Comments: Data lacking.
Auto-ignition temperature	Value: > 220 °C
Decomposition temperature	Comments: Data lacking.
Viscosity	Value: > 20,5 mm2/s Temperature: 40 °C Type: Kinematic

9.2. Other information

Physical hazards

Oxidising liquids	Assessment: Not oxidizing.

9.2.2. Other safety characteristics

Evaporation rate	Data lacking.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Under normal condtions and use there are not expected any reactivity hazards for this chemical.

10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	May arise in contact with incompatible materials (see section 10.5) and/or under inappropriate conditions (see section 10.4).

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharge.

10.5. Incompatible materials

Materials to avoid	Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Hydrogen sulphide, an extremely flammable and toxic gas, and other hazardous vapours may evolve and collect in the headspace of storage tanks, transport vessels and other enclosed containers. See also section 5.2.

SECTION 11: Toxicological information

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

Acute toxicity

Effect tested: LD50
Route of exposure: Oral
Value: > 5000 mg/kg
Species: Rat

Effect tested: LD50
Route of exposure: Dermal
Value: > 2000 mg/kg
Species: Rabbit

Effect tested: LC50
Route of exposure: Inhalation.
Duration: 4 hour(s)
Value: > 1,0 ≤ 5,0 mg/l
Species: Rat

Other information regarding health hazards

Assessment of acute toxicity, classification	Harmful by inhalation.
Assessment of skin corrosion / irritation, classification	Based on available data, the classification criteria are not met. Prolonged or repeated contact leads to drying of skin.
Assessment of eye damage or irritation, classification	Based on available data, the classification criteria are not met.
Assessment of respiratory sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of skin sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of germ cell mutagenicity, classification	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	May cause cancer.
Assessment of reproductive toxicity, classification	Suspected of damaging the unborn child
Assessment of specific target organ toxicity - single exposure, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - repeated exposure, classification	May cause damage to organs (blood, liver, thymus) through prolonged or repeated exposure .
Assessment of aspiration hazard, classification	Based on available data, the classification criteria are not met.

Symptoms of exposure

In case of ingestion	Data lacking.
In case of skin contact	Prolonged and repeated contact can cause drying of the skin.

In case of inhalation

Solvent vapors may be harmful and overexposure may cause headaches, nausea, vomiting, and intoxication.
Inhalation of H2S at low concentrations (≤ 10 ppm):
Irritating to the airways.
Inhalation of H2S at concentrations ≤ 100 ppm:
Headache, nausea, dizziness, unsteady gait and diarrhea.
Inhalation of H2S at concentrations 200 ppm:
Potential for pulmonary oedema after >20-30 minutes.
Inhalation of H2S at high concentrations (about 500 ppm):
The respiratory center is paralyzed and can cause death within a few seconds.
Exposure to non-lethal levels can cause long-term or permanent nerve damage or pulmonary edema.

In case of eye contact

May cause temporary eye irritation. May cause stinging and redness.
After contact with hydrogen sulphide typically so-called "gas eye" may appear, which is an experience of seeing colored rings around lights.

11.2 Other information

Endocrine disruption

The substance is not known or suspected to be endocrine disrupting.

Other information

Contact with hot material can cause thermal burns which may result in permanent tissue damage on skin and in eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Very toxic to aquatic life with long lasting effects.
Acute toxicity to fish:
Expected to be harmful, LL/EL/IL50: 10-100 mg/l
Acute algae toxicity:
Expected to be very toxic, LL/EL/IL50: <1 mg/l
Acute aquatic toxicity:
Expected to be toxic, LL/EL/IL50: 1-10 mg/l
Acute toxicity to microorganisms:
Not expected to be toxic, LL/EL/IL50: > 100 mg/l
Chronic toxicity to fish:
NOEC/NOEL expected to be: > 0,01 - ≤ 0,1 mg/l (based on test data)
Chronic toxicity to aquatic invertebrates:
NOEC/NOEL expected to be: > 0,1 - ≤ 1,0 mg/l (based on test data)

12.2. Persistence and degradability

Persistence and degradability, comments

The product is potentially degradable.
Volatile solvents are rapidly oxidized by photochemical reaction in air.

12.3. Bioaccumulative potential

Bioaccumulative potential

Contains components which have bioaccumulative potential.

12.4. Mobility in soil

Mobility

The product contains volatile substances, which may spread in the atmosphere.
Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day.
May contaminate soil and groundwater.
Sinks in fresh water, but will float on sea water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB.

12.6. Endocrine disrupting properties

Endocrine disrupting properties

The substance is not known or suspected to be endocrine disrupting.

12.7. Other adverse effects

Additional ecological information

Avoid release to the environment. Forms an oil film on water surfaces that may harm organisms in the water and disrupt oxygen transport in the boundary layer between air and water.
Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical

Do not empty into drains. Recover and reclaim or recycle, if practical.
Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intented as a guide. The code must be chosen by the user, if the use differs from the one mentioned below.

Appropriate methods of disposal for the contaminated packaging

Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. 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.

EWC waste code

EWC waste code: 130701 fuel oil and diesel
Classified as hazardous waste: Yes

EWC waste code: 130703 other fuels (including mixtures)
Classified as hazardous waste: Yes

SECTION 14: Transport information

Dangerous goods

Yes

14.1. UN number

ADR/RID/ADN

3082

IMDG

3082

ICAO/IATA

3082

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name/Danger releasing substance English ADR/RID/ADN	(Fuel oil, residual)
ADR/RID/ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name/danger releasing substance ADR/RID/ADN	(Fuel oil, residual)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name/danger releasing substance IMDG	(Fuel oil, residual)
ICAO/IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name/danger releasing substance ICAO/IATA	(Fuel oil, residual)

14.3. Transport hazard class(es)

ADR/RID/ADN	9
Classificaton code ADR/RID/ADN	M6
IMDG	9
ICAO/IATA	9

14.4. Packing group

ADR/RID/ADN	III
IMDG	III
ICAO/IATA	III

14.5. Environmental hazards

IMDG Marine pollutant	Yes

14.6. Special precautions for user

Special safety precautions for user	Follow loading regulations in ADR/RID/IMDG/ICAO-TI

14.7. Maritime transport in bulk according to IMO instruments

Additional information

Hazard label ADR/RID/ADN	9
Hazard label IMDG	9
Hazard label ICAO/IATA	9
Additional information	MARPOL Annex I rules apply for bulk shipments by sea.

ADR/RID Other information

Tunnel restriction code	-
Transport category	3
Hazard No.	90

IMDG Other information

EmS	F-A, S-F

SECTION 15: Regulatory information

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

References (laws/regulations)	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP-regulation) with later amendments. Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH Regulation), with later amendments. European Waste Catalogue and Hazardous Waste List The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009. Control of Major Accident Hazards (COMAH) Regulations 2015

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes

SECTION 16: Other information

Supplier's notes	The information contained in this SDS must be made available to all those who handle the product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.
List of relevant H-phrases (Section 2 and 3)	EUH 066 Repeated exposure may cause skin dryness or cracking. H220 Extremely flammable gas. H330 Fatal if inhaled. H332 Harmful if inhaled. H350 May cause cancer . H361d Suspected of damaging 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.
Recommended restrictions on use	This product is intended for use in closed systems only.
Abbreviations and acronyms used	ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road DNEL: Derived No Effect Level EWC: European Waste Code (a code from the EU's common classification system for waste)

	EL50: The effective concentration of substance (slightly soluble) that causes 50% of the maximum response. IATA: The International Air Transport Association ICAO: The International Civil Aviation Organisation IMDG: The International Maritime Dangerous Goods Code LC50: Median concentration lethal to 50% of a test population. LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%. LL50: Lethal level: loading rate that kills 50% of exposed organisms. NOEC: No Observable Effect Concentration. NOEL: No Obserced Effect Level. The highest tested dose or exposure level at which, in a study, no statistically significant effect is observed in the exposed population compared with an appropriate control group. PNEC: Predicted No Effect Concentration RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail
Information added, deleted or revised	Sections being revised since previous version: 1.2, 2.3, 3.2 (comment), 8.2, 9.1, 11. 2, 12.6 Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	2
Prepared by	Kiwa Technical Consulting AB v/ Milvi Rohtla
Exposure scenario	1 Use of substance as intermediate.pdf 2 Formulation & (re)packing of substances and mixtures.pdf 3 Use in fuel, industrial.pdf 4 Use in fuel, professional.pdf