

FUEL JET A-1, Kerosine Jet A-1

Compilation date: 01.10.1998 / Revision: 13.12.2021

Version: 1

SAFETY DATA SHEET

In accordance with REACH Regulation

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Trade name:

Fuel JET A-1 Kerosine Jet A-1	UFI: WR10-20MU-U004-2WCK
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Contains Straight run kerosine

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Identified uses

Identified use	Process category [PROC]	Product category [PC]	Sector of use [SU]	Article category [AC]	Environmental release category [ERC]
Industrial					
01 – Manufacture of substance	PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15	–	SU3, SU8, SU9	–	ERC1, ERC4
01b – Use as intermediate	PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC15	–	SU3, SU8, SU9	–	ERC6a
01a – Distribution of substance	PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15	–	SU3	–	ERC1, ERC2, ERC3, ERC4, ERC5, ERC6a, ERC6b, ERC6c, ERC6d, ERC7
02 – Formulation and re-packaging of substance and its mixtures	PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15	–	SU3, SU10	–	ERC2
12a – Use as fuel (industrial)	PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16	–	SU3	–	ERC7
13a – Use as functional fluids (industrial)	PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9	–	SU3	–	ERC7
Professional					
12b – Use as fuel (professional)	PROC1, PROC2, PROC3, PROC8a, PROC8b, PROC16	–	SU22	–	ERC9a, ERC9b
Consumer					
12c – Use as fuel (consumer)	–	PC13,	SU21	–	ERC9a, ERC9b

Descriptor list

- PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC4 Chemical production where opportunity for exposure arises
- PROC5 Mixing or blending in batch processes
- PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC14 Tableting, compression, extrusion, pelletisation, granulation
- PROC15 Use as laboratory reagent
- PROC16 Use of fuels
- PC13 Fuels
- ERC1 Manufacture of the substance

ERC2	Formulation into mixture
ERC3	Formulation into solid matrix
ERC4	Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC5	Use at industrial site leading to inclusion into/onto article
ERC6a	Use of intermediate
ERC6b	Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC6c	Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC6d	Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC7	Use of functional fluid at industrial site
ERC9a	Widespread use of functional fluid (indoor)
ERC9b	Widespread use of functional fluid (outdoor)
SU3	Industrial uses
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
SU9	Manufacture of fine chemicals
SU10	Formulation [mixing] of mixtures and/or re-packaging (excluding alloys)
SU21	Consumer uses
SU22	Professional uses

Uses advised against

Other uses than those listed above are not recommended, unless the assessment is done prior to use to prove that the risk is adequately controlled. This additional assessment is the responsibility of the individual registrant..

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer Polski Koncern Naftowy ORLEN S.A.
 09-411 Płock, ul. Chemików 7, Poland
 Telephone no.: (+48 24) 365 00 00
 Fax no.: (+48 24) 365 45 55
 Telephone no.: (+48 24) 365 35 24
 e-mail: reach@orlen.pl (an e-mail address for a competent person responsible for the safety data sheet)

1.4. EMERGENCY TELEPHONE NUMBER

The Company Fire Brigade
 The National Emergency Centre for the Transport of Dangerous Goods - SPOT
 - Telephone no.: (+48 24) 365 70 32 and (+48 24) 365 70 33 (available 24h)
 - e-mail: straz.pozarna@orlen.pl

Section 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

According to Regulation (EC) no. 1272/2008 (CLP)

Physicochemical hazards

Flam. Liq. 3 H226 Flammable liquid and vapour.

Health hazards

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
 Skin Irrit. 2 H315 Causes skin irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness

Environmental hazards

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2. LABEL ELEMENTS

Hazard pictogram(s)



Signal word(s) Danger

Hazard statement(s)

H226 Flammable liquid and vapour

H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H336 May cause drowsiness or dizziness
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

General precautionary statements

P102 Keep out of reach of children.

Prevention

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331 Do NOT induce vomiting.

Storage –

Disposal

P501 Dispose of contents/container to a licensed waste disposal company/waste incineration plant.

2.3. OTHER HAZARDS

Vapours may form explosive mixtures with air. Vapours are heavier than air, spread right above ground surface and accumulate in the lower parts of rooms.

Closed containers exposed to fire or high temperature may explode due to increased internal pressure.

Spilled materials may cause slippery surface.

The product does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Not applicable - the product is a mixture.

3.2. MIXTURES

Identification of the main component

UVCB substance. A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C₉ through C₁₆ and boiling in the range of approximately 150°C to 290°C.

EC name	Kerosine (petroleum), Straight run kerosine
Group	KEROSINE
EC no.	232-366-4
CAS no.	8008-20-6
Index no.	649-404-00-4
Registration no.	01-2119485517-27-0064
Molecular formula	Not applicable, UVCB substance
Molecular mass	Not applicable, UVCB substance
Classification	See section 2 of the safety data sheet

The product may contain substances listed below (in additive packages) that are below concentration limit but with OELs assigned.

Product identifier	Substance name	% mass	Classification
CAS no.: 91-20-3 EC no.: 202-049-5 Index no.: 601-052-00-2 Registration no.: 01-2119561346-37-xxxx	naphthalene	<0.01	Carc. 2, H351 Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Flam Sol. 1, H228

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CAS no.: 108-88-3 EC no.: 203-625-9 Index no.: 601-021-00-3 Registration no.: 01-2119471310-51-xxxx	toluene	<0.05	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, H373 Skin irrit. 2, H315 STOT SE 3, H336
CAS no.: 95-63-6 EC no.: 202-436-9 Index no.: 601-043-00-3 Registration no.: 01-2119472135-42-xxxx	1,2,4-trimethylbenzene	<0.005	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335 Aquatic Chronic 2, H411
CAS no.: 67-63-0 EC no.: 200-661-7 Index no.: 603-117-00-0 Registration no.: 01-2119457558-25-xxxx	isopropanol	<0.005	Flam Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
CAS no.: 67-56-1 EC no.: 200-659-6 Index no.: 603-001-00-X Registration no.: 01-2119433307-44-xxxx	methanol	<0.0003	Flam. Liq 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370 STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %

The text of the H-phrases is shown in section 16 of the safety data sheet.

Identification of impurities

Not available.

Section 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General recommendations

Consider your safety and health as priority – use breathing apparatus, protective clothing and eye protection, suitable for the situation. Prior to providing any first aid measures, make sure that all sources of ignition have been removed; cut the power supply off.

Be careful – Spilled materials may cause slippery surface.

Do not leave the injured unattended. Do not induce vomiting and do not give anything by mouth to an unconscious person. Take off contaminated clothing and boots. To reduce potential for static discharge, rinse contaminated clothing with water before removing clothes to avoid the risk of sparks from static electricity.

Inhalation

Immediately remove to fresh air, keep warm and calm.

Control the patency of the respiratory tract

If a victim is conscious, place him in a semi-sitting position, if unconscious, lay him in the recovery position.

In case of breathing disorders, administer oxygen if possible. If not breathing, start artificial respiration (do not use mouth-to-mouth method).

In case of cardiac arrest, perform cardiopulmonary resuscitation (CPR) (qualified person only).

Get medical attention immediately.

Contact with skin

Take off contaminated clothing and boots. Wash contaminated skin with water and soap, and then rinse with plenty of water. If irritation appears and persists, consult a doctor.

In case of contact with the mixture released under high pressure, get medical attention immediately even symptoms do not occur yet.

If hot mixture contacts skin, cool the affected area with cool water for at least 5 minutes or until the pain is reduced. Avoid excessive cooling of the body.

Contact with eyes

Remove contact lenses, if present. Flush contaminated eyes with plenty of water for 15 minutes holding the eyelids open. Attention: protect the non-contaminated eye.

If irritation or any other symptoms (swelling, blurred vision) appear, consult an ophthalmologist.
ATTENTION: Do not use strong streams of water, which can cause cornea damage.

Ingestion

Do not induce vomiting – aspiration hazard.

If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration.

If a victim is conscious, wash mouth with water and give 200 ml of liquid paraffin to drink.

ATTENTION: This procedure should be applied even if petrol poisoning is suspected.

Do not give milk, oil, alcoholic beverages.

Get medical attention **immediately** even symptoms do not occur.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation In normal conditions of use inhalation is unlikely due to low vapour pressure. Exposure to vapours may occur when the product is used at high temperature and if the ventilation is insufficient.

The symptoms of inhalation exposure are: headache, nausea, vomiting, loss of consciousness.

Contact with skin Direct contact with the product may cause dryness, redness, skin irritation.

Contact with eyes Splashing into the eye may cause tearing, moderate irritation during prolonged exposure.

Ingestion Causes gastrointestinal disorders, central nervous system disorders.

Refer also to section 11.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If ingested, seek immediate medical attention.

Show the safety data sheet, label or packaging to a medical personnel providing first aid.

If a large dose have been ingested, empty the stomach as soon as possible. Gastric lavage may only be performed with the patient intubated. Administration of liquid paraffin may limit the absorption of the product.

In case of breathing disorders apply oxygen therapy or intubation; start artificial respiration if necessary. Control the heart rate (EKG). Treat symptomatically.

Treatment should be performed by a qualified medical personnel.

Do not administer epinephrine and ephedrine – risk of ventricular fibrillation.

Administer antibiotics in severe poisoning cases or pneumonia to prevent pulmonary complications.

Treat symptomatically.

Section 5: FIREFIGHTING MEASURES**General recommendations**

Inform others about fire; all persons not directly involved with the operation should remain clear of the area (danger zone); order evacuation if necessary; call the rescue teams, the fire brigade and the State Police.

5.1. EXTINGUISHING MEDIA

Suitable Extinguishing Media: small fire - carbon dioxide, dry chemical powder, foam, sand; large fire – water spray or mist, foam.

Unsuitable Extinguishing Media: water jets may cause spattering and spread the fire.

Simultaneous use of foam and water on the same surface should be avoided as water destroys the foam.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Flammable liquid (flash point ≤ 60 °C) insoluble in water and lighter than water that floats on water surface and may be re-ignited. Vapours are heavier than air, and form explosive mixtures with air.

Closed containers exposed to fire or high temperature may explode due to increased internal pressure.

In case of fire, carbon oxides and other unidentified hydrocarbon decomposition products (smoke) may be generated. Avoid breathing combustion products - it can be hazardous to your health.

5.3. ADVICE FOR FIREFIGHTERS

Follow the guidelines for the fire extinguishment of chemicals.

Extinguish large fire from a safe distance, behind shields, using a remote sprinkler system or unmanned water jets - risk of explosion.

Cool down imperilled containers with water spray from a safe distance (risk of explosion); if **possible and safe** remove from a danger zone and continue spraying until containers are cooled down.

Prevent from entering contaminated water and other extinguishing agents into sewage system and water – possibility of explosion in the sewage system, and re-ignition of the liquid surface.

Dispose of waste water in compliance with current legislation.

People should be properly trained and equipped with protective clothing resistant to fire, eye/face protection and self-contained breathing apparatus (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

ATTENTION: Risk of fire and explosion. Prevent vapour accumulation above the ground level or in confined spaces in order to avoid accumulation of explosive concentrations.

Vapours can spread considerable distance to source of ignition and flashback.

ATTENTION: Be careful – Spilled materials may cause slippery surface.

Inform others about the accident; all persons not directly involved with the operation should remain clear of the area (danger zone); order evacuation if necessary. Isolate the spillage area.

Remove all sources of ignition – do not use open flame, do not smoke, do not use sparking tools etc. Equipment used should be grounded.

Avoid direct contact with the released product. Do not step on the spilled liquid. Avoid breathing vapours/mist. In case of large spillage, stay on the windward side.

Provide adequate ventilation if released in confined area. If possible, monitor vapour concentration.

Use exhalometer or an indicator prior to action as well as during operations in particular in confined spaces.

Use adequate personal protective equipment as required in Section 8 of the safety data sheet. In case of small spills, normal antistatic working clothes are suitable. In case of large spills, use a protective suit made of chemically resistant and antistatic materials.

6.2. ENVIRONMENTAL PRECAUTIONS

Prevent from entering into the sewage system, surface water or soil. Prevent accumulation in lower parts of room, basements, pits, drains and other places where this could pose a hazard.

If possible and safe, eliminate or limit the leakage (seal the leakage, close liquid supply, place the damaged container in an emergency container).

Construct a dike to prevent spreading. If possible cover the surface with foam in order to reduce vapour emission, continue until action is taken over by a rescue team.

Inform relevant authorities, if released large quantities of product and contamination of the environment (OHS services, rescue services, environmental protection services, administrative authorities).

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Dike large spill and pump it out carefully using specialized equipment.

Small spills cover with non-flammable absorbent (sand, earth, diatomaceous earth, vermiculite), collect into the tightly closed, properly labelled waste containers.

Dispose of in compliance with current legislation (refer to sections 13 and 15).

If necessary, remove the contaminated soil layer.

If the product is released into water, limit spreading by using floating water barriers or different equipment. Collect the mixture by absorption using special floating binders or a skimmer, a special floating pump used to remove fuel from the surface of water.

If necessary, obtain help from an authorized companies dealing with waste transport and utilisation.

6.4. REFERENCE TO OTHER SECTIONS

Refer to Sections 8, 13 and 15 of the safety data sheet.

Section 7: HANDLING AND STORAGE

Workers should be trained in terms of health hazard, safety precautions to minimize exposure, OHS requirements, PPE usage, accidents and emergency situations prevention as well as proper rescue operations.

Worker's exposure should be minimized by introducing appropriate risk management measures.

7.1. PRECAUTIONS FOR SAFE HANDLING

Provide easy access to rescue equipment (in case of fire, release, etc.) in the storage and usage area.

ATTENTION: Risk of fire and explosion. Flammable liquid; vapours form explosive mixtures with air.

Recommendations for safe handling

Avoid prolonged skin contact; avoid eye contamination; avoid breathing vapours/mist.

Prevent formation of hazardous concentrations of vapours in air. Provide adequate ventilation; provide exhaust ventilation at places where emission of vapours is possible.

Keep unused containers sealed. Containers should only be opened in a well ventilated area. Once opened containers should be re-sealed and stored upright to prevent leakage.

Do not use compressed air to fill or empty the containers or transfer the product.

Use adequate personal protective equipment as required in Section 8 of the safety data sheet.

Recommendations for fire and explosion protection

Vapours are heavier than air – prevent vapours accumulation and formation of flammable/explosive mixtures, in particular in hollows, channels and confined spaces.

Remove all sources of ignition - do not use open flame, do not smoke, do not use sparking tools and clothing made of fabric susceptible to electrification. Take precautionary measures against static discharges. Protect containers against overheating.

Use explosion-proof electrical equipment, prevent accumulation of electrostatic charges, use bonding and grounding.

Avoid contact with oxidizing agents.

Comply with regulations regarding explosive atmosphere, handling and storage of flammable products

Refer also to the safety data sheet appendix – *Exposure scenarios*.

Recommendations for occupational health and safety

Observe all applicable occupational health and safety regulations. Observe the principles of good industrial hygiene.

Do not eat, drink or smoke in the workplace. Wash hands with water and soap after work. Do not use contaminated clothing. Take off immediately all contaminated clothing and wash it before reuse.

ATTENTION: Keep the contaminated/soaked clothing in a closed container, away from sources of ignition.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in accordance with regulations regarding storage of flammable liquids.

Store in the certified, original, properly labelled, tightly closed containers in a cool and well-ventilated place. Containers must be resistant to the product.

Recommended container materials or container lining materials are: soft steel, stainless steel.

Unsuitable container materials or container lining materials are: certain synthetic materials; their compliance must be verified with the manufacturer.

Store in an upright position, away from sources of heat, sources of ignition, protect from direct sunlight; secured against fall, impact or mechanical damage.

ATTENTION: maintain caution when opening the containers – light hydrocarbon vapours may accumulate in the upper part of the container and create explosion and fire hazard.

Storage area should be cool and equipped with explosion-proof ventilation and electrical installation. Take precautions to avoid electrostatic discharge; Use explosion-proof electrical equipment, use bonding and grounding.

Do not smoke, do not use open flame and sparking tools in the storage area.

Store away from strong oxidizing agents. Refer also to section 10.

Cleaning, inspection and maintenance works of storage tanks must be carried out only by a qualified and properly equipped personnel in accordance with applicable regulations.

Installations should be designed to prevent water and soil contamination in case of leakage or spillage.

ATTENTION: Emptied, non-cleaned containers may contain product residues (liquid, vapours) and may pose a fire/explosion hazard. Be careful. Do not cut, drill, grind, weld uncleaned containers or perform these activities in their vicinity.

7.3. SPECIFIC END USE(S)

See sub-section 1.2. For more information, contact the manufacturer/supplier.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Occupational exposure limits in the workplace

*Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the maximum permissible concentration and intensity of harmful factors in the work environment (Journal of Laws 2018, item 1286; Journal of Laws 2020, item 61)
Commission Directive 2000/39/EC with amendments.*

Petroleum [CAS 8008-20-6] PL: NDS: 100 mg/m³; NDSCh: 300 mg/m³; NDSP: –
Determination in the air: PN-Z-04227-02:1992
EU: TWA 8h: –, STEL 15 min: –
UK: TWA 8h: –, STEL: –

Impurities for which occupational exposure limit values have been assigned

Naphthalene [CAS 91-20-3] PL: NDS: 20 mg/m³; NDSCh: 50 mg/m³; NDSP: –
EU: TWA 8h: –, STEL 15 min: –
UK: TWA 8h: –, STEL: –

1,2,4-trimethylbenzene [CAS 95-63-6] NDS: 100 mg/m³; NDSCh: 170 mg/m³; NDSP: –
EU: TWA 8h: 20 ppm, 100 mg/m³, STEL 15 min: –
UK: TWA 8h: –, STEL: –

Toluene [CAS 108-88-3] PL: NDS: 100 mg/m³; NDSCh: 200 mg/m³; NDSP: –
EU: TWA 8h: 192 mg/m³, 50 ppm, STEL: 15 min: 384 mg/m³, 100 ppm
UK: TWA 8h: 50 ppm, 191 mg/m³, STEL: 100 ppm, 384 mg/m³

Isopropanol [CAS 67-63-0] PL: NDS: 900 mg/m³; NDSCh: 1200 mg/m³; NDSP: –
EU: TWA 8h: –, STEL 15 min: –

Methanol [CAS 67-56-1] UK: TWA 8h: 400 ppm, 999 mg/m³, STEL: 500 ppm, 1250 mg/m³
PL: NDS: 100 mg/m³; NDSCh: 300 mg/m³; NDSP: –
EU: TWA 8h: 200 ppm, 260 mg/m³, STEL 15 min: –
UK: TWA 8h: 200 ppm, 266 mg/m³, STEL: 250 ppm, 333 mg/m³

Admissible concentration in biological material

Data not available.

DNEL and PNEC

- used for the environmental risk assessment

Not available.

- used for the worker risk assessment

acute toxicity – systemic exposure
dermal / inhalation Hazard not identified.
acute toxicity – local exposure
dermal DNEL cannot be determined.
inhalation Hazard not identified.
long-term toxicity – systemic exposure
dermal / inhalation Hazard not identified.
long-term toxicity – local exposure
dermal DNEL cannot be determined.
inhalation Hazard not identified.

- used for the general population risk assessment

acute toxicity – systemic exposure
dermal / inhalation Hazard not identified.
acute toxicity – local exposure
dermal DNEL cannot be determined.
inhalation Hazard not identified.

long-term toxicity – systemic exposure	
dermal / inhalation	Hazard not identified.
oral	19 mg/kg (24 h)
long-term toxicity – local exposure	
dermal	DNEL cannot be determined.
inhalation	Hazard not identified

8.2. EXPOSURE CONTROLS

Physical form of product: liquid, vapour pressure at STP (25°C) 0,5-10 kPa.

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

Assumes a good basic standard of occupational hygiene is implemented. Operation is carried out at elevated temperatures (>20°C above ambient temperature).

Appropriate engineering controls

Process containment is recommended.

Explosion-proof ventilation and electrical installation.

Provide general and/or local exhaust ventilation to keep vapours concentration below harmful limits. Local exhaust ventilation is preferred, since it controls emission at its source and prevents spreading.

Use explosimeter in closed rooms and production areas to measure vapour concentrations and detect conditions with risk of explosion.

Refer also to section 7.

Individual protection measures, such as personal protective equipment

Use of PPE should depend on the type of hazard, working conditions and product handling.

Use PPE from a reputable supplier.

PPE should comply with the requirements of applicable standards and regulations.

Respiratory protection Not required when used in normal conditions. When exposed to dangerous/ unknown concentrations of vapours/mists and/or insufficient ventilation use approved respirator with A type filter.

Use self-contained breathing apparatus in case of working in a confined area/insufficient oxygen concentration/large uncontrolled emission/ any other cases where respirator with filter does not provide adequate protection.

Hand protection Wear protective, impervious gloves that are resistant to oils (e.g. perbutane of thickness > 0,1 mm, breakthrough time > 480 min., Viton of thickness > 0,1 mm, breakthrough time > 480 min., butyl rubber of thickness > 0,1 mm, breakthrough time > 480 min). Selection of the glove material requires consideration of the penetration times, rates of diffusion and the degradation. It is recommended to change gloves regularly or immediately if they are used or damaged (torn or punctured) or its appearance change (colour, elasticity, shape).

Eye and face protection Tightly fitting safety glasses (goggles) and face shield if there is a risk of splashing into the eye, in particular a gush of hot product.

Skin protection An apron or coated fabric clothing, resistant to the product; antistatic clothing is recommended. Safety shoes.

Avoid contact with skin. Identify potential areas of indirect contact of the product with skin. If contact is likely, wear protective gloves (according to EN374). Immediately remove contamination/spillage. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimize exposures and to report any skin problems that may develop.

Environmental exposure controls

Prevent release of non-dissolved mixture and recovery from local waste water. The risk of environmental exposure depends on the freshwater and the freshwater sediment. Local treatment of waste water is not required when released to a sewage treatment plant from a household.

Do not pour industrial sludge onto natural soil. Burn, neutralize or recondition the sludge. Consider securing the area around the storage tanks.

Observe the permissible environmental pollution levels specified in the applicable regulations.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties	Data from the CSR for the Concawe Registration Category: Kerosines	Data for the fraction analyzed by the manufacturer
a) Physical state	Liquid of low viscosity	Liquid free of solid particles and undissolved water
b) Colour	Colourless	Clear and clean
c) Odour	Characteristic	Characteristic
d) Melting point/freezing point	< -20°C	< -47°C (freezing point ASTM D2386)
e) Boiling point or initial boiling point and boiling range	90– 320°C	10% distils to <=205°C distillation end point >=300 °C
f) Flammability	Flammable liquid and vapour	
g) Lower and upper explosion limit	Not available	Not available (NOTE: product vapours may form explosive mixtures with air).
h) Flash point	29 –70°C	Min. 38°C
i) Auto-ignition temperature	220 – 250°C	
j) Decomposition temperature	Not available	
k) pH	Not applicable	
l) Kinematic viscosity	1-2,4 cSt at 40°C 2,8 – 4,3 cSt at -20°C	Max. 8,0 mm ² /s at -20°C
m) Solubility	Not applicable	Practically insoluble
n) Partition coefficient n-octanol/water (log value)	Not applicable	Not available – UVCB substance
o) Vapour pressure	<1 to 3,7 kPa at 37,8°C	ca. 0.9 kPa at 38 °C (study 01.2021)
p) Density and/or relative density	0,77 – 0,85g/cm ³ at 15°C	0,775– 0,840 g/cm ³ at 15°C
q) Relative vapour density	Not available	
r) Particle characteristics	Not applicable	

9.2. OTHER INFORMATION

None.

Section 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

The mixture is not reactive. Refer to subsection 10.5.

10.2. CHEMICAL STABILITY

The mixture is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous reactions are not known.

Hazardous polymerization will not occur.

10.4. CONDITIONS TO AVOID

Remove all sources of ignition: sparks, electrostatic discharges, open flames, heat sources. Avoid ignition and heat sources in particular in a potentially explosive area.

10.5. INCOMPATIBLE MATERIALS

Strong oxidizers.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Not known. Hazardous combustion products are included in Section 5 of the safety data sheet.

Section 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008

General provisions

The mixture is classified as hazardous to human health. The test results presented below refer to the main component of the mixture.

The main component is a complex mixture (UVCB substance), for which not many test results are available. There are more data available for a number of kerosene constituents, and these can be used as a basis for understanding the pharmacokinetics of this substance (i.e. absorption, distribution, metabolism and excretion).

There are three ways in which humans are exposed to kerosene: by inhalation, ingestion, and dermal contact. Due to relatively low volatility of the substance, dermal exposure can be more important route of exposure than exposure via inhalation. Ingestion occurs primarily as a consequence of accident.

The inhalation studies demonstrate that the volatile kerosene constituents are well absorbed (31 – 54%) and are distributed mainly in the fat tissues. Aromatics were metabolized at a higher rate than naphthalenes, n-alkanes, isoalkanes and 1-alkenes.

Dermal application of the substance generally shows that the aromatics and aliphatics are well absorbed into the skin. The aromatics penetrate the skin at a higher rate than the alkanes. SKINPERM calculations indicate that although skin permeation rates of alkanes, naphthalenes and aromatics are more or less comparable, the latency times of alkanes are longer than the latency times of naphthalenes and aromatics. After absorption, the kerosene constituents are distributed via the blood circulation to the fat tissue and various organs. Studies with oral exposure to kerosene indicate that gastrointestinal absorption of kerosene is slow and incomplete, resulting in low bioavailability.

Acute toxicity

- | | |
|-------------------|---|
| - oral, rat | LD ₅₀ > 5000 mg/kg bw (method similar to OECD 420) |
| - dermal, rabbit | LD ₅₀ > 2000 mg/kg bw (method similar to OECD 402) |
| - inhalation, rat | LC ₅₀ > 5,28 mg/l (method similar to OECD 403) |

The most important effects in animals following very high oral doses were slight irritation of the stomach and the gastrointestinal tract.

The only adverse effects observed in acute inhalation studies were decrease activity and breathing frequency at very high doses.

Dermal application did not lead to acute toxic systemic effects. Clinical effects observed were related to dermal irritation rather than to systemic toxicity.

The mixture has low acute oral, dermal and inhalation toxicity. Based on available data, the classification criteria are not met.

Skin corrosion/irritation

The main component ranges from essentially non-irritating after 4 hours of semi-occlusive exposure to severely irritating after 24 hours of occluded exposure. Symptoms vary strongly and range from very faint erythema to severe irritation in humans and from epidermal changes (e.g. hyperkeratosis) to necrosis and ulceration of the epidermis in animals. The mechanisms of the irritation and the following inflammatory reaction have been studied in further detail, showing that fuel may induce the production and release of proinflammatory factors such as cytokines.

Considering the conditions of the skin irritation test (method similar to OECD 404), results must be interpreted carefully for the purpose of classification and labelling. The average result for erythema and edema indicates that this substance causes skin irritation and is classified as *Skin Irrit. 2, H315*.

Serious eye damage/irritation

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

The degree of irritancy is substance-, dose- and exposure-time-dependent. Eye irritation studies on rabbits (OECD 405) exposed to 0.1 ml of test substance showed no irritation according to the mean cornea, iris or conjunctivae scores.

Respiratory tract irritation

Based on available data, the classification criteria are not met. This endpoint is not required.

Respiratory or skin sensitisation

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

Skin

In classical assays for skin sensitisation such as the Magnusson-Kligman GPMT and the Buehler assay, the main component did not trigger a positive response.

Respiratory tract

This endpoint is not required.

Repeated dose toxicity

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

The repeated inhalation and oral studies of kerosine in rats produced no consistent toxicological effects other than changes in male rat kidneys that are not considered relevant to humans.

NOAEL(oral)	: 750 mg/kg bw/d
NOAEL (dermal)	: \geq 400 mg/kg bw/d (target organ: skin)
NOAEC (inhalation)	: \geq 1000 mg/m ³

Germ cell mutagenicity

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

Mutagenic or genotoxic effects were not reported in humans. The weight of evidence from in vitro and in vivo mutagenic studies indicates that the mixture is likely not a mutagen.

All in vitro assays were negative for genotoxicity, except for one assay (method similar to OECD 471, 476, 479). The in vivo cytogenicity testing produced some contradictory results – negative results were obtained in rats and female mice, but positive results were obtained in male mice. All in vivo chromosome aberration and dominant lethal assays were negative for genotoxicity (OECD 475, 478), while one in vivo sister chromatid exchange assay (modified OECD 479) was positive for genotoxicity in male, but not in female mice.

Carcinogenicity

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

The main component is not carcinogenic when animals are exposed via the oral or inhalation route. However, chronic skin contact with the substance may lead to tumour formation as a consequence of repeated cycles of irritation, skin damage and repair (method similar to OECD 451).

The substance was not found to be mutagenic and genotoxic, and the observations from animal studies confirm the non-genotoxic nature of the skin tumour formation. Although dermal irritation alone seems not sufficient to cause dermal tumourigenicity, studies clearly show that dermal irritation and inflammation are prerequisites for dermal carcinogenicity.

LOAEL (dermal)	: 200 mg/kg bw/d (target organ: skin)
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Reproductive toxicity

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

Fertility

The animal data indicate that long-term oral and inhalation exposure to the substance has no effect on the fertility of male rats up to 3000 mg/kg/day or a concentration of 1000 mg/m³ (highest concentration tested) and no effect on the fertility of female rats up to a dose of 1500 mg/kg/day (highest concentration tested). The main component does not cause fertility effects (OECD 421).

NOAEL (oral)	: \geq 3000 mg/kg bw/d
NOAEL (dermal)	: \geq 494 mg/kg bw/d
NOAEC (inhalation)	: \geq 1000 mg/m ³

Developmental toxicity

All animal studies show that the substance has no effects on development (OECD 414). The most important effects in animals following high doses was a decreased body weight of the females and of the pups at 1500 mg/kg/day.

NOAEL (oral)	: 1000 mg/kg bw/d
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NOAEL (dermal) : ≥ 494 mg/kg bw/d
NOAEC (inhalation) : ≥ 364 ppm

Additional reproductive toxicity studies do not appear to be scientifically necessary, as a reproduction-developmental toxicity screening test and two prenatal developmental studies conducted under internationally agreed validation principles provided no indication that the substance has adverse reproductive effects. Further no adverse effects on reproductive organs have been noted in oral repeat dose studies.

Aspiration hazard

The mixture may be fatal if swallowed and enters airways based on its physicochemical properties (*Asp. Tox. 1, H304*).

Other effects

Neurotoxicity

This endpoint is not required.

In experimental animals studies (male rats exposed to vapours) there were no treatment-related effects on clinical signs or mortality, and effects on body weight. No other changes were noted in blood biochemistry. There were no treatment-related effects between exposure and neurobehavioral symptoms.

Immunotoxicity

This endpoint is not required.

NOAEL: > 495 mg/kg bw/d (Based on overall effects, no adverse affect on immune responses of female rats at any dose level)

Photoirritation

Photoirritation studies on skin showed that the substance is not considered a photoirritant.

Photoirritation index: 0,7 (72 h)

Acute health effects and symptoms

- Inhalation** Inhaling vapours/mist may cause irritation and swelling of the oral mucous membrane; irritation of the respiratory tract, cough and breathing difficulties, sore throat, toxic, bronchopneumonia. Higher vapour/fog concentrations may cause central nervous system disorders, such as headache and dizziness, distorted coordination, nausea, vomiting, disorientation, states of euphoria, nervousness, memory disorders, blurred vision, shortness of breath, weakness, pain in the epigastric fossa, sternum pains, lethargy, toxic coma. Exposure to high concentrations may cause shuddering or convulsions, sudden loss of consciousness, coma, paralysis of the respiratory tract, which may result in death.
- Ingestion** Due to low viscosity, if swallowed and vomited, the product may penetrate the lungs and cause their severe damage (Mendelson's syndrome, lung petechia, pleural effusion). May cause oral cavity, throat and gastric irritation, temporary symptoms of liver damage. Other symptoms include: nausea, belching with characteristic smell, abundant vomiting, diarrhea.
- Contact with skin** Skin degrease, itching, burning, cracking, irritation.
- Contact with eyes** High vapour/mist concentrations or splashing into the eye may cause irritation of the mucous membrane, conjunctivitis, tearing.
- Long-term exposure to low vapour concentrations may cause smell disorders, chronic conjunctivitis, disorders within peripheral nerves.

11.1. INFORMATION ON OTHER HAZARDS

Not known.

Section 12: ECOLOGICAL INFORMATION

General provisions

Bases on available data, the mixture meets the criteria as *Aquatic Chronic 2, H411*.

When a complex petroleum substance is released into the environment, the hydrocarbon constituents distribute to the different environment compartments according to individual physic-chemical properties (e.g. volatility, water solubility, partition coefficient). Exposure concentrations are further modulated by differential degradation rates between constituents and compartments. This makes it difficult to assess environmental exposure of petroleum

substances from field monitoring studies because measured concentrations of constituents or total hydrocarbons detected in the environment can no longer be directly related to the original petroleum substance. Therefore, it is not possible to directly apply current risk assessment guidance developed for simple substances to complex petroleum substances. To assess the environmental risk of complex petroleum substances, models based on grouping were used.

The mixture is practically water-insoluble and lighter than water; floats on the water surface.

Based on the regional scale exposure assessment calculated using the PETRORISK Model, the multimedia distribution of the substance is (calculation according to Mackay, Level III):

air: 91,57 % ; water: 1,54 % ; soil: 4,82 % ; sediment: 2,07 %
suspended sediment: < 0,1 % ; biota: < 0,1 % ; aerosol: < 0,1 %

Evaporation is the most suitable process to remove the main substance from the surface of water and soil. Due to a high vaporization rate, the substance does not accumulate in the environment. More complex hydrocarbons may penetrate the soil.

The test results described below refer to the main component of the mixture.

12.1. TOXICITY

Aquatic compartment (including sediment)

Short-term/long-term toxicity to fish

In semi-static 96-hour acute *Oncorhynchus mykiss* test (OECD 203; KS = 1), animals were exposed to concentrations 0 / 0,2 / 0,7 / 2,0 / 5,0 / 17,0 and 50 mg/l. Some fish were observed swimming abnormally and immobilisation was also observed.

LL₅₀ (96 h): *Oncorhynchus mykiss* 2 - 5 mg/l

NOEL (96 h): *Oncorhynchus mykiss* 2,0 mg/l

Experimental data for long-term toxicity is not available. The aquatic toxicity was estimated by a QSAR, the PETROTOX computer model. PETROTOX computes toxicity based on the summation of the aqueous-phase concentrations of hydrocarbon block(s) that represents a hydrocarbon substance and membrane-water partition coefficient (K_{mw}) that describes the partitioning of the hydrocarbons between the water and organisms.

NOEL (28d) for freshwater fish was estimated

NOEL (28 d): *Oncorhynchus mykiss* 0,098 mg/l

Short-term/long-term toxicity to invertebrates

Static 48-hour acute test (OECD 202; KS = 1) on *Daphnia magna* AT nominal concentrations of 0 / 0,1 / 0,3 / 1,4 / 6,8 and 34 mg/l

EL₅₀ (48 h): *Daphnia magna* 1,4 mg/l (with 95% confidence interval of 1,0 to 2,0 mg/l)

NOEL (48 h): *Daphnia magna* 0,3 mg/l (determined by immobilisation)

The toxicity was confirmed using WAF methodology

EL₅₀ (48 h): *Daphnia magna* 1,9 - 89 mg/l (loading rate resulting in 50 % immobilization)

NOEL (48 h): *Daphnia magna* 0,3 - 2,0 mg/l

A 21-day semi-static chronic reproductive toxicity test (OECD 211; KS = 1), the actual loading rates were 0 (control) / 0,08 / 0,19 / 0,48 / 1,2 and 3,0 mg/l

NOEL (21 d): *Daphnia magna* 0,48 mg/l

LOEL (21 d): *Daphnia magna* 1,2 mg/l

EL₅₀ (21 d): *Daphnia magna* 0,89 mg/l

Toxicity on alga and aquatic plants

A 72-hour toxicity static test (OECD 201; KS = 1), cultures of the freshwater algae were exposed to nominal concentrations of 0 / 0,1 / 0,4 / 1,0 / 3,0, and 10,0 mg/l. The % growth inhibition, in the treated algal cultures as compared to the control ranges from 7,1 to 270%.

EL₅₀ (72 h): *Raphidocelis subcapitata* 1 - 3 mg/l

NOAEL (72 h): *Raphidocelis subcapitata* 1,0 mg/l

Toxicity to microorganisms

The aquatic toxicity was estimated by a QSAR, the PETROTOX computer model. PETROTOX computes toxicity based on the summation of the aqueous-phase concentrations of hydrocarbon block(s) that represents a hydrocarbon substance and membrane-water partition coefficient (K_{mw}) that describes the partitioning of the hydrocarbons between the water and organisms.

The estimated 72-hour LL50 values for one of the most sensitive microorganism species:

LL₅₀ (72 h): *Tetrahymena pyriformis* 677,9 mg/l (based on growth inhibition)

NOAEL (72 h): *Tetrahymena pyriformis* 1,641 mg/l

Terrestrial compartment

Not available.

Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for the risk assessment of this complex substance. For the purpose of risk assessment, soil PNECs for hydrocarbon blocks have been derived using aquatic PNECs and the equilibrium partitioning method (EqP) using representative structures.

Atmospheric compartmentDirect effects

Toxicity to mammals – refer to section 11.1.

No data are available to characterize direct effects of air borne concentrations of this substance on vegetation. Several risk assessment reports on individual hydrocarbons with relatively high vapour pressure (e.g. n-pentane, cyclohexane, benzene, toluene, ethylbenzene, [www://ecb.jrc.ec.europa.eu/esis](http://www.ecb.jrc.ec.europa.eu/esis)) and some experimental studies indicate vapour phase toxicity to terrestrial plants poses a low concern.

Indirect effect

The substance may contribute to ozone formation.

Toxicity to birds

Studies in long-term or reproductive toxicity to birds do not need to be conducted due to the existence of a large mammalian dataset.

Toxicity to mammals

This endpoint is not required.

12.2. PERSISTENCE AND DEGRADABILITY**Hydrolysis**

The chemical constituents present in the product consist entirely of carbon and hydrogen and do not contain hydrolysable groups. Therefore, this degradative process will not contribute to their removal from the environment.

Phototransformation / photolysisAir

Standard tests for atmospheric oxidation half-lives are intended for single substances and are not appropriate for this complex substance.

Water and soil

This substance contains hydrocarbon molecules that absorb UV light below 290 nm, a range of UV light that does not reach the earth's surface. Therefore, this substance does not have the potential to undergo photolysis in water and soil, and this fate process will not contribute to a measurable degradative loss of this substance from the environment.

Biodegradation

The substance is practically insoluble in water, lighter than water.

For the purpose of risk assessment, this end point is characterized using quantitative structure property relationship for representative hydrocarbon structures that comprise the hydrocarbon blocks.

Based on available data it is considered that the substance is not readily biodegradable, but as it can be degraded by micro-organisms, it is regarded as being inherently biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

For the purpose of risk assessment, this end point is characterized using quantitative structure property relationship for representative hydrocarbon structures that comprise the hydrocarbon blocks.

The substance has low potential to accumulate, however an evaluation of representative hydrocarbon structures indicate, some structures meet the Persistent (P) Or very Persistent (vP) criteria.

an evaluation of representative hydrocarbon structures indicate no structures meet the very Bioaccumulative (vB) criterion but some structures meet the Bioaccumulative (B) criterion

Secondary poisoning

A secondary poisoning assessment is not required because the substance does not exhibit a high bioaccumulation potential or classification on the basis of mammalian toxicity data..

12.4. MOBILITY IN SOIL

Not available.

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

Persistence assessment An evaluation of representative hydrocarbon structures indicate some structures meet

the Persistent (P) Or very Persistent (vP) criteria.

Bioaccumulation assessment An evaluation of representative hydrocarbon structures indicate no structures meet the very Bioaccumulative (vB) criterion but some structures meet the Bioaccumulative (B) criterion.

Toxicity assessment No structures relevant to petroleum substances were found to meet the toxicity criterion except anthracene which has been confirmed as a PBT substance.

Anthracene is not present in this substance at greater than 0.1%. No other representative hydrocarbon structures were found to meet the PBT/vPvB criteria.

12.6. ENDOCRINE DISRUPTING PROPERTIES

Data not available.

12.7. OTHER ADVERSE EFFECTS

Not available.

ADDITIONAL INFORMATION ON ENVIRONMENT FATE AND BEHAVIOUR

In conducting a PBT assessment of hydrocarbon substances, the Hydrocarbon Block Method is used together with predictive tools for assessing the primary half-life. The review shows that hydrocarbons are degraded (under aerobic conditions) via mono-oxygenases or di-oxygenases, and are subsequently carboxylated and ultimately hydroxylated. In further assessing the type of metabolites formed, it has been demonstrated that for all the major classes of hydrocarbons, the major metabolites are in most cases less toxic, and always less bioaccumulative than the parent molecule. It is concluded that for PBT and risk assessment purposes, the metabolites of hydrocarbons do not require any further assessment.

Section 13: DISPOSAL CONSIDERATIONS

General provisions

If possible, reduce or eliminate waste generation.

Observe the safety measures specified in section 7 and 8.

13.1 WASTE TREATMENT METHODS

Waste classification: Wastes are classified according to their source, pursuant to criteria specified in applicable regulations.

If the product was further used in any operations/processes, the end user should define the waste type and assign a proper waste code.

Waste disposal

Do not discharge into drains. Avoid surface and ground water contamination. Do not landfill. Consider re-use.

Recycle or dispose of waste in compliance with current legislation.

Preferred method: combustion.

Disposal of packaging

Packaging may contain product residues, ensure that it is properly cleaned.

Recycle or dispose of packaging waste in compliance with current legislation.

Reusable packaging, it can be re-used after cleaning.

Waste disposal should be carried out by a professional, authorized incineration plant or waste treatment plants.

Additional information

Directive 2008/98/EC of the European Parliament and of the Council of the Member State.

Section 14: TRANSPORT INFORMATION

	<p>General information</p> <p>The product is classified as dangerous and is subjected to the transport of dangerous goods regulations RID, ADR, IMDG, IATA..</p> <p>Based on the knowledge about the product, necessary analysis and appropriate RID/ADR classification a sender should always prepare a guideline for the transportation.</p>
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FUEL JET A-1, Kerosine JET A-1

Compilation date: 01.10.1998 / Revision: 13.12.2021

Version: 1

	RID, ADR	IMDG	IATA
14.1. UN NUMBER OR ID NUMBER	UN 1863	UN 1863	UN 1863
14.2. UN PROPER SHIPPING NAME	FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE
14.3. TRANSPORT HAZARD CLASS(ES)	3	3	3
Classification code	F1	--	--
Hazard identification No.	30	--	--
Labels	no. 3	no. 3	no. 3
14.4. PACKING GROUP	III	III	III
14.5. ENVIRONMENTAL HAZARDS	Hazardous for the environment. Apply specific regulations under 5.2.1.8 and 5.4.1.1.18	Hazardous for the environment	Hazardous for the environment
14.6. SPECIAL PRECAUTIONS FOR USER	Observe the provisions of applicable regulations. Observe safety precautions described in sections 7 and 8.		
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

See section 13 of this Safety Data Sheet.

Fraction CAS 8008-20-6 is listed in Annex I of the Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III)

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (with amendments)

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (with amendments)

15.2. CHEMICAL SAFETY ASSESSMENT

Chemical safety assessment was carried out for Kerosine.

Section 16: OTHER INFORMATION

The safety data sheet was prepared based on information included in the Chemical Safety Report and applicable regulations.

Revision: 13.12.2021. Version 1: 1.2, 3, 8.1, 9, 11, 12, 16.

Information provided herein serves only as guidelines for safe transport, distribution, handling and storage. It cannot be considered as a quality certificate.

This information applies only to specific material designated and may not be suitable for such material used in combination with any other materials or in any other manner not described in this document.

The product user must observe all applicable standards and regulations and is liable for improper use of information contained in the safety data sheet and improper use of the product.

A list of relevant hazard statements and/or precautionary statements which are not written out in full under Sections 2 to 15

H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H228	Flammable Solid
H301	Toxic if swallowed
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin

H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H361d	Suspected of damaging the unborn child
H370	Causes damage to organs
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.

Legend to abbreviations and acronyms used in the safety data sheet

UVCB	Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials
NDS	Threshold Limit Value
NDSch	Short Term Exposure Limit
NDSP	Threshold Limit Value-Ceiling
DSB	Admissible concentration in biological material
vPvB	Very persistent and very bioaccumulative (substance)
PBT	Persistent, bioaccumulative and toxic (substance)
PNEC	Predicted No Effect Concentration
DNEL	Derived No Effect Levels
LD ₅₀	Dose of a tested substance causing 50% lethality during a specified time interval
LC ₅₀	Lethal Concentration 50%, concentration required to kill half the members of a tested population after a specified test duration
STOT	Specific target organ toxicity
NOAEL	No observed adverse effect level
NOAEC	No observed adverse effect concentration
LL ₅₀	Loading rate of test substance resulting in 50% mortality
NOEL	No observed effect level
LOEL	Lowest observed effect level
(Q)SAR	Quantitative structure–activity relationship
OECD	Organisation for Economic Cooperation and Development
RID	Regulations on International Railway Carriage of Dangerous Goods
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association

Exposure scenario: information from exposure scenarios has been included in the text of the SDS.
