SAFETY DATA SHEET

Aviation Fuel Jet F34 + FSII (NATO code F-34)

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

1.1 Product identifier

Product name : Aviation Fuel Jet F34 + FSII (NATO code F-34)

UFI (EU) : 5F60-309R-200C-FH86

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

Material uses : Aviation turbine fuel

Identified uses
Formulation and (re)packing of substances and mixtures; Industrial Use as a fuel; Industrial Use as a fuel; Professional

Uses advised against	Reason
Use in coatings; Professional	-
Use in cleaning agents; Professional	-
Lubricants; Professional (Low environmental release)	-
Lubricants; Professional (High environmental release)	-
Metal working fluids/Rolling oils; Professional	-
Use as binders and release agents; Professional	-
Use in agrochemicals; Professional	-
Road and construction applications; Professional	-
Explosives manufacture & use; Professional	-
Use in coatings; Consumer	-
Use in cleaning agents; Consumer	-
Lubricants; Consumer (Low environmental release)	-
Lubricants; Consumer (High environmental release)	-
Use in agrochemicals; Consumer	-

1.3 Details of the supplier of the safety data sheet

Supplier : Kuwait Petroleum International Aviation Company (UK) LTD
Duke's Court, Duke Street
GU21 5GH Woking, Surrey
United Kingdom
Tel. +44 (0) 01483 757747

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

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

1.4 Emergency telephone number

United Kingdom (UK) : +44 (0) 1235 239 670

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

CARECHEM24

National advisory body/Poison Centre

United Kingdom (UK) : Contact CareChem24 (see above).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

FLAMMABLE LIQUIDS	Category 3	H226
SKIN CORROSION/IRRITATION	Category 2	H315
CARCINOGENICITY	Category 1B	H350
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)	Category 3	H336
ASPIRATION HAZARD	Category 1	H304
LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 2	H411

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity : None.

Ingredients of unknown ecotoxicity : None.

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

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

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
H226 - Flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H350 - May cause cancer.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention :
P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.
P264 - Wash thoroughly after handling.

Response :
P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P362 + P364 - Take off contaminated clothing and wash it before reuse.

Storage : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

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

Supplemental label elements : Not applicable.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements

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

Tactile warning of danger : Not applicable.

2.3 Other hazards

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Kerosine (petroleum), sweetened	EC: 294-799-5 CAS: 91770-15-9 Index: 649-427-00-X	≤100	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Carc. 1B, H350 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Kerosine (petroleum), hydrodesulfurized	EC: 265-184-9 CAS: 64742-81-0 Index: 649-423-00-8	≤100	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Carc. 1B, H350 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Kerosine (petroleum)	EC: 232-366-4 CAS: 8008-20-6 Index: 649-404-00-4	≤100	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Carc. 1B, H350 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Hydrocarbons, C11-C16, n-alkanes, isoalkanes, < 2% aromatics	EC: 942-085-5	≤50	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1]
Renewable hydrocarbons (kerosene type fraction)	EC: 931-082-4	≤50	Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066	[1]
Contains: cumene (Constituent)	EC: 202-704-5 CAS: 98-82-8 Index: 601-024-00-X	<1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350	[1] [2]

SECTION 3: Composition/information on ingredients

2-(2-methoxyethoxy)ethanol	EC: 203-906-6 CAS: 111-77-3 Index: 603-107-00-6	≤0.3	STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Eye Irrit. 2, H319 Repr. 1B, H360D **See Section 16 for the full text of the H statements declared above.**	[1] [2]

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

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

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

SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

SECTION 4: First aid measures

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

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

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

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

4.3 Indication of any immediate medical attention and special treatment needed

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

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

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

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. Hazardous concentrations of hydrogen sulphide (H2S) gas may accumulate in the vapour space of storage vessels. Standard procedures for opening or entering tanks, vessels or other containers must strictly be followed to avoid inhalation of this acutely toxic gas.

SECTION 7: Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

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

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Contains: cumene (Constituent)	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. STEL 15 minutes: 250 mg/m³. STEL 15 minutes: 50 ppm. TWA 8 hours: 25 ppm. TWA 8 hours: 125 mg/m³.
2-(2-methoxyethoxy)ethanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin. TWA 8 hours: 10 ppm. TWA 8 hours: 50.1 mg/m³.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result

SECTION 8: Exposure controls/personal protection

Renewable hydrocarbons (kerosene type fraction)	**DNEL - Workers - Long term - Dermal** 42 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 147 mg/m³ Effects: Systemic
Contains: cumene (Constituent)	**DNEL - General population - Long term - Dermal** 1.2 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 15.4 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Inhalation** 100 mg/m³ Effects: Systemic **DNEL - Workers - Short term - Inhalation** 250 mg/m³ Effects: Local **DNEL - General population - Long term - Oral** 5 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Inhalation** 16.6 mg/m³ Effects: Systemic
2-(2-methoxyethoxy)ethanol	**DNEL - General population - Long term - Inhalation** 30.1 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 50.1 mg/m³ Effects: Systemic **DNEL - General population - Long term - Dermal** 1.33 mg/kg bw/day Effects: Systemic **DNEL - Workers - Long term - Dermal** 2.22 mg/kg bw/day Effects: Systemic **DNEL - General population - Long term - Oral** 7.5 mg/kg bw/day Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

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

Individual protection measures

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

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

Skin protection

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

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

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

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2. Gas and combination filter cartridges should comply with the European standard EN14387.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Appearance : Clear

Colour : Colourless to light yellow

Odour : Characteristic

Odour threshold : Not available.

SECTION 9: Physical and chemical properties

Melting point/freezing point : <-45°C (<-49°F) [ASTM D 97]

Initial boiling point and boiling range : 150 to 300°C (302 to 572°F) [ASTM D 86]

Flammability (solid, gas) : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Upper/lower flammability or explosive limits : Lower: 0.6%
Upper: 6%

Flash point : Closed cup: >38°C (>100.4°F) [ISO 2719]

Auto-ignition temperature : >220°C (>428°F)

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Kinematic (40°C (104°F)): 1 to 2.5 mm^2/s (1 to 2.5 cSt) [ASTM D 445]

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Partition coefficient: n-octanol/water : >2

Vapour pressure : <0.5 kPa (<3.76 mm Hg)

Evaporation rate : Not available.

Density : 0.775 to 0.84 g/cm^3 [15°C (59°F)] [ASTM D 4052]

Vapour density : Not available.

Explosive properties : Not applicable.

Oxidising properties : Not applicable.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Not available.

SECTION 10: Stability and reactivity

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

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

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

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

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Kerosine (petroleum), hydrodesulfurized	**Rat - Oral - LD50** >5000 mg/kg
Kerosine (petroleum)	**Rat - Oral - LD50** 15 g/kg Toxic effects: Skin After topical exposure - Corrosive
Contains: cumene (Constituent)	**Rat - Oral - LD50** 1400 mg/kg Toxic effects: Gastrointestinal - Gastritis **Rat - Inhalation - LC50 Vapour** 39000 mg/m³ [4 hours]

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Kerosine (petroleum) Contains: cumene (Constituent)	15000 1400	N/A N/A	N/A N/A	N/A 39	N/A N/A

Skin corrosion/irritation

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**Rabbit - Skin - Oedema** Acute Dermal Irritation/Corrosion Duration of treatment/exposure: 4 hours Observation period: 7 days Irritation score: 0 Fully reversible
Kerosine (petroleum), hydrodesulfurized	**Rabbit - Skin - Oedema** Acute Dermal Irritation/Corrosion Duration of treatment/exposure: 4 hours Observation period: 7 days Irritation score: 0 Fully reversible **Rabbit - Skin - Moderate irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
Kerosine (petroleum)	**Rabbit - Skin - Oedema** Acute Dermal Irritation/Corrosion Duration of treatment/exposure: 4 hours Observation period: 7 days Irritation score: 0 Fully reversible **Rabbit - Skin - Moderate irritant** Amount/concentration applied: 0.5 Ml

SECTION 11: Toxicological information

Rabbit - Skin - Moderate irritant
Duration of treatment/exposure: 24 hours
Amount/concentration applied: 100 %

Rabbit - Skin - Severe irritant
Amount/concentration applied: 500 mg

Contains:
cumene (Constituent)

Rabbit - Skin - Mild irritant
Duration of treatment/exposure: 24 hours
Amount/concentration applied: 10 mg

Rabbit - Skin - Moderate irritant
Duration of treatment/exposure: 24 hours
Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Irritating to skin.

Ingredient name	Conclusion/Summary
Kerosine (petroleum), sweetened	Non-irritant to skin.
Kerosine (petroleum), hydrodesulfurized	Non-irritant to skin.
Kerosine (petroleum)	Non-irritant to skin.

Serious eye damage/eye irritation

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**Rabbit - Eyes - Oedema of the conjunctivae** EPA OTS 798.4500 Duration of treatment/exposure: 72 hours Irritation score: 0 Fully reversible
Kerosine (petroleum), hydrodesulfurized	**Rabbit - Eyes - Oedema of the conjunctivae** EPA OTS 798.4500 Duration of treatment/exposure: 72 hours Irritation score: 0 Fully reversible
Kerosine (petroleum)	**Rabbit - Eyes - Oedema of the conjunctivae** EPA OTS 798.4500 Duration of treatment/exposure: 72 hours Irritation score: 0 Fully reversible
Contains: cumene (Constituent)	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Eyes - Mild irritant** Amount/concentration applied: 86 mg
2-(2-methoxyethoxy)ethanol	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg **Rabbit - Eyes - Moderate irritant** Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Non-irritating to the eyes.

Ingredient name	Conclusion/Summary
Kerosine (petroleum), sweetened	Non-irritating to the eyes.
Kerosine (petroleum), hydrodesulfurized	Non-irritating to the eyes.
Kerosine (petroleum)	Non-irritating to the eyes.

SECTION 11: Toxicological information

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**Guinea pig - skin** EPA OTS 798.4100 Result: Not sensitizing
Kerosine (petroleum), hydrodesulfurized	**Guinea pig - skin** EPA OTS 798.4100 Result: Not sensitizing
Kerosine (petroleum)	**Guinea pig - skin** EPA OTS 798.4100 Result: Not sensitizing

Skin

Conclusion/Summary [Product] : Not sensitizing

Ingredient name	Conclusion/Summary
Kerosine (petroleum), sweetened	Not sensitizing
Kerosine (petroleum), hydrodesulfurized	Not sensitizing
Kerosine (petroleum)	Not sensitizing

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**In vitro - Bacteria** Result: Negative **In vivo - Mammalian-Animal - Intraperitoneal** Result: Negative
Kerosine (petroleum), hydrodesulfurized	**In vitro - Bacteria** Result: Negative **In vivo - Mammalian-Animal - Intraperitoneal** Result: Negative
Kerosine (petroleum)	**In vitro - Bacteria** Result: Negative **In vivo - Mammalian-Animal - Intraperitoneal** Result: Negative

Conclusion/Summary [Product] : No mutagenic effect.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Carcinogenic.

SECTION 11: Toxicological information

Reproductive toxicity

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**Rat - Male, Female - Dermal** Reproduction/Developmental Toxicity Screening Test Reproduction/Developmental Toxicity Screening Test 494 mg/kg [7 days per week] [14 days] Maternal toxicity: Negative Developmental: Negative
Kerosine (petroleum), hydrodesulfurized	**Rat - Male, Female - Dermal** Reproduction/Developmental Toxicity Screening Test Reproduction/Developmental Toxicity Screening Test 494 mg/kg [7 days per week] [14 days] Maternal toxicity: Negative Developmental: Negative
Kerosine (petroleum)	**Rat - Male, Female - Dermal** Reproduction/Developmental Toxicity Screening Test Reproduction/Developmental Toxicity Screening Test 494 mg/kg [7 days per week] [14 days] Maternal toxicity: Negative Developmental: Negative

Conclusion/Summary [Product] : Not considered to be toxic to the reproductive system.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Kerosine (petroleum), sweetened	STOT SE 3, H336 (Narcotic effects)
Kerosine (petroleum), hydrodesulfurized	STOT SE 3, H336 (Narcotic effects)
Kerosine (petroleum)	STOT SE 3, H336 (Narcotic effects)
Contains: cumene (Constituent)	STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Kerosine (petroleum), sweetened	ASPIRATION HAZARD - Category 1
Kerosine (petroleum), hydrodesulfurized	ASPIRATION HAZARD - Category 1
Kerosine (petroleum)	ASPIRATION HAZARD - Category 1
Hydrocarbons, C11-C16, n-alkanes, isoalkanes, < 2% aromatics	ASPIRATION HAZARD - Category 1
Renewable hydrocarbons (kerosene type fraction)	ASPIRATION HAZARD - Category 1
Contains: cumene (Constituent)	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

SECTION 11: Toxicological information

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

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

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

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**Sub-chronic - Rat - Female - Oral - NOAEL** 750 mg/kg [7 days per week] [21 weeks] **Sub-acute - Rat - Male, Female - Dermal - NOAEL** Repeated Dose Dermal Toxicity: 21/28-day Study ≥0.5 mg/kg [5 days per week] [28 days] **Sub-acute - Rat - Male, Female - Inhalation - NOAEL Vapour** Repeated Dose Inhalation Toxicity: 28-day or 14-day Study ≥24 mg/m³ [5 days per week] [28 days]
Kerosine (petroleum), hydrodesulfurized	**Sub-chronic - Rat - Female - Oral - NOAEL** 750 mg/kg [7 days per week] [21 weeks] **Sub-acute - Rat - Male, Female - Dermal - NOAEL** Repeated Dose Dermal Toxicity: 21/28-day Study ≥0.5 mg/kg [5 days per week] [28 days] **Sub-acute - Rat - Male, Female - Inhalation - NOAEL Vapour** Repeated Dose Inhalation Toxicity: 28-day or 14-day Study ≥24 mg/m³ [5 days per week] [28 days]
Kerosine (petroleum)	**Sub-chronic - Rat - Female - Oral - NOAEL** 750 mg/kg [7 days per week] [21 weeks]

SECTION 11: Toxicological information

Sub-acute - Rat - Male, Female - Dermal - NOAEL
Repeated Dose Dermal Toxicity: 21/28-day Study
≥0.5 mg/kg [5 days per week] [28 days]

Sub-acute - Rat - Male, Female - Inhalation - NOAEL Vapour
Repeated Dose Inhalation Toxicity: 28-day or 14-day Study
≥24 mg/m³ [5 days per week] [28 days]

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
Kerosine (petroleum), sweetened	**Acute - LC50 - Fresh water** Fish, Acute Toxicity Test Fish 2 to 5 mg/l [96 hours] **Acute - EC50 - Fresh water** Daphnia sp. Acute Immobilization Test and Reproduction Test Daphnia 1.4 mg/l [48 hours] Effect: Mobility **Acute - EC50 - Fresh water** Alga, Growth Inhibition Test Algae 1 to 3 mg/l [72 hours] Effect: (growth rate)
Kerosine (petroleum), hydrodesulfurized	**Acute - LC50 - Fresh water** Fish, Acute Toxicity Test Fish 2 to 5 mg/l [96 hours] **Acute - EC50 - Fresh water** Daphnia sp. Acute Immobilization Test and Reproduction Test Daphnia 1.4 mg/l [48 hours] Effect: Mobility **Acute - EC50 - Fresh water** Alga, Growth Inhibition Test Algae 1 to 3 mg/l [72 hours] Effect: (growth rate)
Kerosine (petroleum)	**Acute - LC50 - Fresh water** Fish, Acute Toxicity Test Fish 2 to 5 mg/l [96 hours]

SECTION 12: Ecological information

	Acute - EC50 - Fresh water Daphnia sp. Acute Immobilization Test and Reproduction Test Daphnia 1.4 mg/l [48 hours] Effect: Mobility **Acute - EC50 - Fresh water** Alga, Growth Inhibition Test Algae 1 to 3 mg/l [72 hours] Effect: (growth rate)
Contains: cumene (Constituent)	**Acute - LC50 - Fresh water** Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* 2700 µg/l [96 hours] Effect: Mortality **Acute - EC50 - Marine water** Crustaceans - Brine shrimp - *Artemia sp.* - Nauplii Age: 2 to 3 7.4 mg/l [48 hours] Effect: Intoxication **Acute - EC50 - Fresh water** Algae - Green algae - *Raphidocelis subcapitata* 2600 µg/l [72 hours] Effect: Growth
2-(2-methoxyethoxy)ethanol	**Acute - EC50 - Fresh water** US EPA Daphnia - Water flea - *Daphnia magna* Age: <24 hours >930 ppm [48 hours] Effect: Intoxication **Acute - LC50 - Fresh water** Fish - Bluegill - *Lepomis macrochirus* 7500 ppm [96 hours] Effect: Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
Aviation Fuel Jet F34 + FSII (NATO code F-34)	Ready Biodegradability - Manometric Respirometry Test 58.6% [28 days] - Inherent
Kerosine (petroleum), sweetened	Ready Biodegradability - Manometric Respirometry Test 58.6% [28 days] - Inherent
Kerosine (petroleum), hydrodesulfurized	Ready Biodegradability - Manometric Respirometry Test 58.6% [28 days] - Inherent
Kerosine (petroleum)	Ready Biodegradability - Manometric Respirometry Test 58.6% [28 days] - Inherent

Conclusion/Summary [Product] : This product is inherently biodegradable.

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Aviation Fuel Jet F34 + FSII (NATO code F-34)	-	-	Inherent
Kerosine (petroleum), sweetened	-	-	Inherent
Kerosine (petroleum), hydrodesulfurized	-	-	Inherent
Kerosine (petroleum)	-	-	Inherent

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Aviation Fuel Jet F34 + FSII (NATO code F-34)	>2	-	Low
Kerosine (petroleum), sweetened	3 to 6	-	High
Kerosine (petroleum), hydrodesulfurized	3 to 6	-	High
Kerosine (petroleum)	3 to 6	-	High
Contains: cumene (Constituent)	3.55	35.48	Low
2-(2-methoxyethoxy)ethanol	-0.47	-	Low

12.4 Mobility in soil

Soil/water partition coefficient : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Kerosine (petroleum), sweetened	No	No	No	Yes	No	No	No
Kerosine (petroleum), hydrodesulfurized	No	No	No	Yes	No	No	No
Kerosine (petroleum)	No	No	No	Yes	No	No	No
Hydrocarbons, C11-C16, n-alkanes, isoalkanes, < 2% aromatics	No	No	No	No	No	No	No
Renewable hydrocarbons (kerosene type fraction)	No	No	No	No	No	No	No
Contains: cumene (Constituent)	No	No	No	Yes	No	No	No
2-(2-methoxyethoxy)ethanol	No	No	No	Yes	No	No	No

12.6 Other adverse effects

: No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

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

Hazardous waste : Yes.

Waste catalogue

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

Packaging

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

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1863	UN1863	UN1863	UN1863
14.2 UN proper shipping name	FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE	Fuel, aviation, turbine engine
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Hazard identification number 30
Limited quantity 5 L
Special provisions 664
Tunnel code (D/E)

ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

SECTION 14: Transport information

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-E
Special provisions 223

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.
Special provisions A3

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

14.7 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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

Product/ingredient name	%	Designation [Usage]
Aviation Fuel Jet F34 + FSII (NATO code F-34)	≥90	3 28
Kerosine (petroleum), sweetened; Kerosine - unspecified; [A complex combination of hydrocarbons obtained by subjecting a petroleum distillate to a sweetening process to convert mercaptans or to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of 130°C to 290°C (266°F to 554°F).]	≤100	28
Kerosine (petroleum), hydrodesulfurized	≤100	28
Kerosine (petroleum); Straight run kerosine; [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon	≤100	28

SECTION 15: Regulatory information

numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150°C to 290°C (320°F to 554°F).]		
cumene	<1	28
2-(2-methoxyethoxy)ethanol	≤0.3	54

Labelling : Restricted to professional users.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c
E2

EU regulations

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

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

Germany - Hazard class for water (WGK) : 2

Switzerland - VOC : VOC (w/w): 100%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

SECTION 15: Regulatory information

United States of America : Not determined.

Viet Nam : Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM = American Society for Testing and Materials
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
DIN = German Institute for Standardization
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = European Commission
EC50 = Half maximal effective concentration
EN = European Standard (Norm)
EUH statement = GB CLP-specific Hazard statement
GHS - Globally Harmonised System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IC50 = Half maximal inhibitory concentration
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organisation
ISO = International Organization for Standardization
LC50 = Median lethal concentration
LD50 = Median lethal dose
LOAEL / LOAEC = Lowest Observed Adverse Effect Level / Concentration
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
NOAEL / NOAEC = No Observed Adverse Effect Level / Concentration
NOEL / NOEC = No Observed Effect Level / Concentration
OECD = Organisation for Economic Co-operation and Development
OEL = Occupational Exposure Limit
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS = Safety Data Sheet
STEL = Short Term Exposure Limit
SVHC = Substances of Very High Concern
TLV = Threshold Limit Value
TWA = Time Weighted Average
UK CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
UN = United Nations
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

SECTION 16: Other information

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Carc. 1B, H350	Calculation method
STOT SE 3, H336	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H360D	May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 1B	CARCINOGENICITY - Category 1B
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

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