Safety Data Sheet

1.0 IDENTIFICATION OF THE SUBSTANCE / MIXTURE

1.1 Product Identification

Substance	**Kerosene (petroleum)**
Commercial Product Name	**Kerosene Type Jet A1** **JSD AVTUR, NATO Code F35**
Synonyms	**Jet, Jet A1, AVTUR F35, Turbine Fuel**
EC no:	**232-366-4**
UK DUIN no.	**UK-20-4764831840-1-0000**

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

Specific Use(s)	**Kerosene type aviation turbine fuel intended for use in aircraft gas turbine engines**
Uses Advised Against	**This product must not be used in applications other than those listed under Specific Uses without first seeking the advice of the supplier**

1.3 Details of the supplier of the SDS

Company	**Greenergy Fuels Limited** **High Holborn** **London** **WC1V 7BD** **UNITED KINGDOM**
Telephone No.	**02074047700**
Email	msds-info@greenergy.com

1.4 Emergency telephone number

Emergency telephone number	**+44 (0)1235 836 100**
Opening Hours	**24 / 7**

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

CLP-Classification: The product is classified as hazardous in accordance with Directive 1272/2008/EEC.

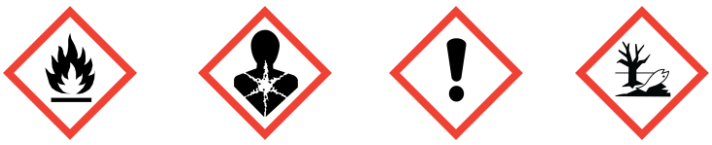
Flam. Liq. 3	H226
Skin Irrit. 2	H315
Asp.Tox. 1	H304
STOT SE 3	H336
Aquatic Chronic 2	H411

For the full text of classification codes and/or H-phrases in this section, see section 2.2 below

2.2 Label elements

Labelling according to Regulation (EU) 1272/2008

CLP pictograms:



GHS02 GHS08 GHS07 GHS09

Signal word: Danger

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

CLP Precautionary statements:
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
P301+P310 - If swallowed, immediately call a doctor
P331 - Do NOT induce vomiting
P264 - Wash thoroughly after handling
P273 - Avoid release to the environment

Other Hazards

If used by Consumers in oil lamps: Keep lamps filled with this liquid out of the reach of children. Just a sip of lamp oil, or even sucking the wick of lamps may lead to life-threatening lung damage

This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur

3.0 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Substance name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP / GHS]
Kerosene (petroleum)	CAS no: 8008-20-6 EC no: 232-366-4 EC Index: 649-404-00-4	100	H226 - Flam. Liq. 3 H315 - Skin Irrit. 2 H304 - Asp.Tox. 1 H336 - STOT SE 3 H411 - Aquatic Chronic 2

For the full text of classification codes and/or H-phrases in this section, see section 2.2

3.2 Mixtures

As a REACH registered UVCB substance under EC no. 223-366-4, kerosene is not categorised as a mixture by REACH (despite typically being blended from a range of other pure and UVCB substances)

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: Move to fresh air and keep at rest
Give oxygen or artificial respiration if casualty has difficulty breathing or tightness of chest
Consult a physician if necessary

Skin contact: Wash off immediately with soap and plenty of water
Take off contaminated clothing and shoes immediately
Wash contaminated clothing before re-use
If skin irritation persists, call a physician

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
If eye irritation persists, consult a specialist

Ingestion: Do NOT induce vomiting
Rinse mouth and obtain medical attention

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Skin contact: Repeated exposure may cause skin dryness or cracking
When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds

Eye contact: Contact with eyes may cause irritation, burning sensation and/or blurred vision

Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea May also cause lung damage if swallowed and enters lungs. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing

4.3 Indication of immediate medical attention and special treatment needed

Treatment:	IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Call a doctor or poison control centre for guidance. Treat symptomatically. Potential for chemical pneumonitis. Do not induce vomiting. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

5.0 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Use dry chemical, CO2, water spray or alcohol resistant foam
Extinguishing media which shall not be used for safety reasons:	Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire. Simultaneous use of foam and water on the surface is to be avoided as water destroys the foam

5.2 Special hazards arising from the substance or mixture

Fire Hazard:	Flammable
Specific hazards:	Vapours may form explosive mixture with air. Vapours are heavier than air and may spread along floors. Flash back possible over considerable distance. The pressure in sealed containers can increase under the influence of heat. Cool containers / tanks with water spray. Burning produces noxious and toxic fumes. Possible decomposition products including carbon monoxide, oxides of sulphur and unidentified organic compounds. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations

5.3 Advice for firefighters

Special protective equipment for fire-fighters:	Wear personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:	Wear personal protective equipment. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Do not smoke

6.2 Environmental precautions

Environmental precautions: Prevent from spreading into surface water or sanitary sewer systems or onto unmade ground/soil by using sand, earth or other suitable barriers

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Remove all sources of ignition. Do not use tools which may produce sparks. Prevent further leakage or spillage if safe to do so. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust), sweep up and shovel into suitable containers for disposal. For large spills, use mechanical means such as vacuum tanker for recovery. After cleaning, flush away traces with water
Dispose of in accordance with local regulations

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling: Wear personal protective equipment. See also section 8. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke. Do not breathe vapours or spray mist. Ensure adequate ventilation. Always replace cap after use

7.2 Conditions for safe storage, including any incompatibilities

Storage: Do not store near or with any of the incompatible materials listed in section 10. Store in original container. Keep tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition

7.3 Specific end use(s)

Specific use(s): see section 1.2

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component: Kerosene (petroleum) (**8008-20-6**)

Workplace exposure limits: No UK workplace exposure limits - (EH40/2005)

DNEL: Available data does not support determination of DNEL
PNEC: Determination not feasible for UVCB hydrocarbon

8.2 Exposure controls

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment
Recommended Filter type: A2

Hand protection: Wear chemically resistant gloves tested for breakthrough time for kerosene in accordance with EN374. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves

Eye protection:	Safety glasses (EN 166)
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product. Use only in area provided with appropriate exhaust ventilation

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	Colourless
Odour:	characteristic
pH:	no data available
Boiling point/boiling range:	ca. 140 - 300°C
Melting point/range:	no data available
Flash point:	ca. > 38 °C
Explosive properties:	no data available
Oxidizing properties:	no data available
Evaporation rate:	no data available
Vapour pressure:	3 kPa @ 20°C
Vapour density:	no data available
Solubility in water:	Insoluble
Viscosity:	1.3 - 2.9 mm^2/s @ 20°C
Density:	770 - 820 kg/m^3 @ 15°C
Partition coefficient:	no data available

9.2 Other information

No data available

10.0 STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity: Flammable liquid

See also section 10.5

10.2 Chemical stability

Stability: Stable under normal conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Conditions to avoid: Heat, flames and sparks

10.5 Incompatible materials

Incompatible materials: Incompatible with strong acids, bases and oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products: Burning produces noxious and toxic fumes. Possible decomposition products are: COx, H2S, SOx

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

General Information

Acute toxicity

Component:	Kerosene (petroleum) **(**EC 232-366-4)
LD50/oral/rat:	> 5000 mg/kg
LC50(4hr)/inhalation/rat:	5.28mg/l air
LD50/dermal/rabbit:	2000mg/kg bw
Inhalation:	May cause irritation of respiratory tract. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Skin contact:	Repeated exposure may cause skin dryness or cracking. Eye contact : Contact with eyes may cause irritation
Ingestion:	Harmful: may cause lung damage if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea

Chronic toxicity:

Further information

No data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity effects:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Fish:	
LL50 (24h):	5-17 mg/l
LL50 (72h):	2-5 mg/l
Aquatic invertebrates:	
LL50 (24 h):	4.6 mg/l
LL50 (48 h):	1.5 mg/l
LL50 long term (21 days):	810 – 890 µg/l

12.2 Persistence and degradability

Persistence and degradability: No information available

12.3 Bioaccumulative potential

Bioaccumulation: Non-persistent

12.4 Mobility in soil

Mobility: No information available

12.5 Results of PBT and vPvB assessment

Not a PBT or vPvB substance

12.6 Other adverse effects

No data available

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products:	In accordance with local and national regulations. Do not burn, or use a cutting torch on, the empty drum. Do not puncture or incinerate
Codes of waste (2001/573/EC, 75/442/EEC, 91/689/EEC):	Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. The following Waste Codes are only suggestions: 130703 – other fuels (including mixtures), 150110 - packaging containing residues of or contaminated by dangerous substances

14. TRANSPORT INFORMATION

14.1 UN Number

UN number: 1223

14.2 UN proper shipping name

Proper shipping name: KEROSENE

14.3 Transport hazard class(es)

14.3.1 Overland transport

Class: 3 - Flammable liquids
Danger code: 30
ADR classification code: F1
ADR danger labels: 3 - Flammable liquid

Orange plates:

ADR tunnel restriction code: D/E ADR
limited quantities: LQ07
ADR excepted quantities: E1

Inland waterway transport (ADN/ADNR)

ADNR class: 3

14.3.2 Transport by sea

Class: 3 - Flammable liquids
EmS: F-E, S-E

14.3.3 Air transport

Class: 3 - Flammable liquids

14.4 Packing group

Packing group: III

14.5 Environmental hazards

Marine pollutant: P

Other information (transport) : No supplementary information available

14.6 Special precautions for users

No data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

15.0 REGULATORY INFORMATION

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

15.1.1 EU-Regulations

No data available

15.1. National regulations

WGK: 3

15.2 Chemical Safety Assessment

Chemical Safety assessment: No data available

16.0 OTHER INFORMATION

(1) Version 9.0, general review and update to improve information in various sections. No change to hazard classification data.

(2) The contents and format of this SDS are in accordance with the ECHA Guidance on the compilation of safety data sheets, version 4.0 December 2020 ECHA-20-H-25-EN

(3) Data used in this SDS has been sourced from the ECHA disseminated REACH dossier information for Gasoline EC 289-220-8

(4) List of Abbreviations:

SDS	Safety Data Sheet
ECHA	European Chemicals Agency
CLP	Classification, Labelling and Packaging Regs.
GHS	Globally Harmonised System [of classification]
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorisation of Chemicals
ADR	Agreement for the transportation of dangerous goods by road
ADN	International Carriage of Dangerous Goods by Inland Waterways
RID	International Carriage of Dangerous Goods by Rail
PBT	Persistent, Bio-accumulative and Toxic
vPvB	Very Persistent and very Bio-accumulative
PCA	Passenger Carrying Aircraft
CAO	Cargo Aircraft Only
STOT	Single Target Organ Toxicity
IBC	International Bulk Chemical code
LEL	Lower Explosive Limit
UEL	Upper Explosive Limit
UVCB	Unknown or Variable Composition or Biological origin