

FOR FURTHER INFORMATION, PLEASE REFER TO THE SDS FOLLOWING

Issue: January 19

PRODUCT: Kerosene
Other Names: Jet A1, Kerosine, Industrial kerosene
Uses: Industrial solvent and formulations component, fuel
Signal Word: Danger

UN No.	1223
Dangerous Goods Class	3
Subsidiary Risk	None
Pack Group	III
Hazchem	3Y

Hazardous Nature:	This product is classified as hazardous under HSNO criteria
Hazardous Classification:	3.1C, 6.1E (oral), 6.1E (aspiration), 6.3B, 9.1B
HSNO Approval Number:	HSR001049
Exposure Standards:	TWA: Ethyl benzene: 434 mg/m ³ (100 ppm); Naphthalene: 52 mg/m ³ (10 ppm); ExxonMobil recommendation for product: Kerosene (stable aerosol): 5 mg/m ³ ; Kerosene (vapour): 200 mg/m ³ ; Kerosene (as total hydrocarbon vapour, non-aerosol): 200 mg/m ³ ; STEL: Ethyl benzene: 543 mg/m ³ (125 ppm); Naphthalene: 79 mg/m ³ (15 ppm)

Physical Characteristics (Typical) **Section 9 of SDS**

Appearance	Clear, pale yellow liquid
Boiling Point/ Range (°C):	>150
Flash Point (°C):	> 38
Specific Gravity/ Density (g/mL @ 20°C):	0.8
Chemical Stability:	Stable at room temperature and pressure

Product Ingredients **Section 3 of SDS**

Kerosene	8008-20-6	>99%
Contains: Ethyl Benzene	100-41-4	0.1-1%
Contains: Naphthalene	91-20-3	<2%

For further ingredients information, please refer to the full SDS.

GHS Pictograms **Section 2 of SDS**



For further risk and safety information, please refer to the full SDS.

DEFINITIONS

Dangerous Goods	Products that are classified as Dangerous for Storage and Transport: these products are allocated a UN No., with accompanying Class, Pack Group, and Sub. Risk, if required. Products that do not have a specific description under the code, but have low flash points, or such, must be classified under their most significant risk, eg. Flammable Goods N.O.S. (Not otherwise specified), UN 1993. Products not classed as Dangerous Goods are designated as not regulated for transport or N/R (non-regulated).
Hazardous Substance	Products are considered to be Hazardous if they pose an intrinsic risk to human or environmental health, such as mutagens (able to change DNA), teratogens (able to result in birth defects), carcinogens (able to generate cell abnormalities), etc. Materials classified with risks such as potential for misuse, like flammability, or explosions when heated and ignited, may be both classed as Dangerous Goods and Hazardous Substances.

1. IDENTIFICATION

Product Name:	Kerosene
Other Names:	Jet A1, Kerosine, Industrial kerosene
Chemical Family:	Aliphatic hydrocarbon
Recommended Use:	Industrial solvent and formulations component, fuel
Supplier:	ASCC Limited
Street Address:	112A Bush Road, Rosedale, Auckland, New Zealand
Telephone:	(09) 966 2447
Emergency phone:	0800 243 622 (24 hours) +64 4 917 9888 (Outside NZ)
National Poisons Centre:	0800 764 766

2. HAZARDS IDENTIFICATION**Hazardous Nature**

This product is classified as hazardous under HSNO criteria

Hazardous Classification

3.1C, 6.1E (oral), 6.1E (aspiration), 6.3B, 9.1B

GHS Pictograms

Signal Word Danger

Dangerous Goods Classification 3

Hazard Statements

- H226: Flammable liquid and vapour
- H304: May be fatal if swallowed and enters airways
- H316: Causes mild skin irritation
- H411: Toxic to aquatic life with long lasting effects

Precautionary Statements

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/light/.../equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response Statements

- P301+ P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor. P331: Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P370+P376: In case of fire: Stop leak if safe to do so.
- P391 Collect spillage

Storage Statements

- P403+P235: Store in a well ventilated place. Keep cool.
- P405: Store locked up.

Disposal Statements

P501: Dispose of contents, or container in accordance with local/regional/national/international regulation.

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	Proportion (%v/v)
Kerosene	8008-20-6	>99
Contains: Ethyl Benzene	100-41-4	0.1-1
Contains: Naphthalene	91-20-3	<2

4. FIRST AID MEASURES

For advice, contact National Poisons Centre (Phone New Zealand: 0800 764 766) or a doctor.

Ingestion

If swallowed, do NOT induce vomiting. Obtain immediate medical advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into lungs.

Eye Contact

Hold eyelids apart and flush the eye with running water for at least 15 minutes. Seek medical attention if irritation persists

Skin/Hair Contact

Remove contaminated clothing. Wash skin with soap and water. If skin irritation occurs, get medical advice. Launder contaminated clothing before re-use.

If product is injected into or under skin, or any other part of body, and regardless of appearance of wound, get immediate medical evaluation as immediate surgical intervention may be needed.

Inhalation

Move the victim to fresh air and keep at rest in a position comfortable for breathing. Begin artificial respiration if breathing has stopped. Seek medical attention

First Aid facilities

Provide eye baths and safety showers.

Medical Attention

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing firefighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable extinguishing media

Water fog, foam, dry chemical or carbon dioxide (CO₂). Do NOT use straight streams of water.

Hazards from combustion products

Smoke, fume, aldehydes, sulphur oxides, carbon dioxide and carbon monoxide and other incomplete combustion products.

Specific Hazards

Flammable liquid and vapour

Precautions for fire fighters and special protective equipment

Full protective clothing and self-contained breathing apparatus. Keep adjacent containers cool by spraying with water.

Hazchem Code: 3Y

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Controls

Avoid contact with spilled material. Isolate and evacuate area. Warn or evacuate occupants in surrounding or downwind areas. Wear personal protective equipment. Prevent entry by unnecessary or unprotected personnel. If possible, isolate or remove sources of ignition.

Emergency Procedures

Prevent material from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours from building up in confined areas. Ensure that drain valves are closed at all times. Clean up and report spills immediately.

Methods and materials for containment**Major Land Spill**

- Eliminate sources of ignition
- Warn occupants of downwind areas of possible fire and explosion hazard
- Prevent product from entering sewers, watercourses, or low-lying areas
- Keep the public away from the area
- Shut off the source of the spill if possible and safe to do so
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation
- Take measures to minimise the effect on ground water
- Contain any spilled liquid with sand or earth
- Recover liquid spills by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations
- See “First Aid Measures” and “Stability and Reactivity”

Major Water Spill

- Eliminate any sources of ignition
- Warn occupants and shipping in downwind areas of possible fire and explosion hazard
- Notify the port or relevant authority and keep the public away from the area
- Shut off the source of the spill if possible and safe to do so
- Confine the spill if possible
- Remove the product from the surface by skimming or with suitable absorbent material
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations
- See “First Aid Measures” and “Stability and Reactivity”.

7. HANDLING AND STORAGE**Precautions for safe handling**

Liquid and vapour are flammable. No smoking. Wear personal protective equipment. Avoid breathing vapours or contact with skin, eyes or clothing. Use outdoors or in well ventilated area. Wash thoroughly after handling and before rest breaks or meals. Use only for intended use.

Keep container closed when not in use. Handle containers with care. Do not open near naked flame, sources of heat or ignition. Open slowly to control possible pressure release. No splash filling. Material will accumulate static charge which may cause an electrical spark (ignition source). Use bonding and/or earthing measures to avoid discharge (electrical spark) but note this may not eliminate hazard.

Conditions for safe storage

Store locked up in a cool, dry place well ventilated place away from direct sunlight and incompatible substances.

Storage and transfer containers, and associated equipment, should be earthed and bonded to prevent accumulation of static discharge. Do not pressurise, cut, heat or weld containers. This product will fuel a fire in progress.

Incompatible materials

Strong acids, alkalis, halogens, strong oxidisers

8. EXPOSURE CONTROLS: PERSONAL PROTECTION**National Exposure Standards**

The time weighted average (TWA) concentration, which means the highest allowable exposure concentration in an eight-hour day for a five-day working week for this product is: Ethyl benzene: 434 mg/m³ (100 ppm); Naphthalene: 52 mg/m³ (10 ppm).

ExxonMobil recommendation for product: Kerosene (stable aerosol): 5 mg/m³; Kerosene (vapour): 200 mg/m³; Kerosene (as total hydrocarbon vapour, non-aerosol): 200 mg/m³.

The short-term exposure limit (STEL), which is the maximum allowable exposure concentration at any time is: Ethyl benzene: 543 mg/m³ (125 ppm); Naphthalene: 79 mg/m³ (15 ppm).

Biological limit values

No values established

Engineering Controls: Ventilation

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment

Respiratory Protection: Where concentrations in air may exceed the limits described in the National Exposure Standards, it is recommended to use a half-face or full-face filter mask to protect from overexposure by inhalation.

Recommended Filter Type: Organic vapour, particulate filter

Refer to AS/NZS 1715: *Selection, Use and Maintenance of Respiratory Equipment* and AS/NZS 1716: *Respiratory Protective Devices* for further details on the use of respiratory protective equipment.

Eye Protection: Always use safety glasses or a face shield when handling this product.

Skin/ Body Protection: Always wear long sleeves and long trousers or coveralls, and enclosed footwear or safety boots when handling this product. It is recommended that chemical resistant gloves (e.g. PVC) be worn when handling this product.

If contact with forearms is possible then wear gauntlet type gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear, pale yellow liquid
Odour	-	Petroleum solvent
Odour Threshold	ppm	Not available
Melting Point/Range	°C	<47
Boiling Point/ Range	°C	>150
Flash Point	°C	> 38
Flammability	-	Flammable
Specific Gravity / Density @ 20°C	g/mL	0.8
Vapour Pressure @ 20°C	kPa	3
Explosive Limits (LEL – UEL)	%	1.0 – 6.0
Vapour Density @ 20°C	kPa	Not available
Autoignition Temperature	°C	250
Decomposition Temperature	°C	Not available
Viscosity @ 20°C	cSt	2
pH	-	Not available
Partition Coefficient Log POW	-	>3.5
Percent Volatiles	%	100
Solubility with Water	% w/w	Negligible
Other Solubility	% w/w	Not available
Other Information	-	-

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

10. STABILITY AND REACTIVITY

Chemical Stability

Stable at room temperature and pressure

Conditions to avoid

Sources of heat and ignition, open flames.

Hazardous decomposition products

Carbon monoxide and carbon dioxide and other noxious vapours on incomplete burning.

Hazardous reactions

Strong oxidisers and heat, strong acids, alkalis, halogens

Hazardous Polymerisation

Will not occur

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

Liquid aspirated into the lungs during ingestion, or from vomiting, may cause chemical pneumonitis, or pulmonary oedema.

Eye Contact

This product may cause mild short lasting discomfort to eyes.

Skin Contact

This product mild irritant to skin. Prolonged or repeated exposure may result in dryness and cracking of skin.

Inhalation

May be irritating to nose, throat and lungs if inhaled. Vapours may cause drowsiness and dizziness. Breathing high vapour concentrations may cause dizziness, light-headedness, headache, nausea and loss of co-ordination. If exposure continues then unconsciousness may result. May cause central nervous system depression.

Chronic Effects

Lifetime skin painting tests produced tumors but the mechanism is due to repeated cycles of skin damage and restorative hyperplasia. This is mechanism is considered to be unlikely in humans where such prolonged skin damage would not be tolerated. This product may also contain low concentrations of naphthalene and ethyl benzene. Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia and cataracts. Naphthalene and ethyl benzene both cause cancer in laboratory animal studies.

Other Health Effects Information

Pre-existing skin conditions may be aggravated by exposure to this product. May aggravate existing dermatitis.

Toxicological Information

Oral / Dermal LD₅₀: Oral: > 2000 mg/kg (rat); Dermal: > 2000 mg/kg (rabbit)

Inhalation LC₅₀: No data available

Acute Toxicity (6.1A, 6.1B, 6.1C, 6.1D): Not classified as an acute toxicant

Aspiration Hazard (6.1E): May be fatal if swallowed and enters airways

Respiratory Irritation (6.1E): Not classified

Skin Corrosion/Irritation (8.2A, 8.2B, 8.2C, 6.3A): Causes mild skin irritation

Serious Eye damage/irritation (8.3A, 6.3A): Not classified

Respiratory or Skin Sensitisation (6.5A, 6.5B): Not classified

Germ cell mutagenicity (6.6A, 6.6B): Not classified

Carcinogenicity (6.7A, 6.7B): Not classified

Reproductive Toxicity (6.8A, 6.8B, 6.8C): Not classified

Specific Organ Toxicity (Repeated and Single Exposure) (6.9A, 6.9B): Not classified

Narcotic Effects (6.9B): Not classified

12. ECOLOGICAL INFORMATION**Ecotoxicity****Aquatic Toxicity**

Fish toxicity, LC ₅₀ (96 hr):	Based on similar materials: EC ₅₀ (Oncorhynchus mykiss): 1-100 mg/L/96 h
Crustacean toxicity (Daphnia Magna), EC ₅₀ (48 hr):	Based on similar materials: EC ₅₀ (Daphnia magna): 1-100 mg/L/48 h; NOELR (Daphnia magna) 0.48 mg/L/21 d
Green algae toxicity, EC ₅₀ (72 hr):	Based on similar materials: EC ₅₀ (Pseudokirchneriella subcapitata) 1-100 mg/L/72 h; NOELR (Pseudokirchneriella subcapitata) 1-10 mg/L/72 h
Blue-green algae toxicity (Cyanobacteria), EC ₅₀ (72 hr):	No data available

Persistence/Degradability

Expected to be readily biodegradable.

Oxidizes by photo-chemical reactions in air.

Mobility

Product has low solubility and will float on water. Expected to migrate from water to land. Expected to partition to sediment and wastewater solids.

Bioaccumulative Potential

Majority of components have potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

Other Information

Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain harmful residue and/or fumes and vapours that are flammable. Ensure that empty packaging is allowed to dry.

Special Precautions for Landfill or Incineration

This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product must be disposed as chemical waste in accordance with the local authority.

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	1223	UN No.	1223	UN No.	1223
Proper Shipping Name	KEROSENE	Proper Shipping Name	KEROSENE	Proper Shipping Name	KEROSENE
DG Class	3	DG Class	3	DG Class	3
Sub. Risk	None	Sub. Risk	None	Sub. Risk	None
Pack Group	III	Pack Group	III	Pack Group	III
Hazchem	3Y	Hazchem	3Y	Hazchem	3Y

Dangerous Goods Segregation

This product is classified as Dangerous Goods Class 3, packing group III.

**15. REGULATORY INFORMATION**

Country/ Region: New Zealand

Inventory: NZIoC

Status: Listed in NZIoC

HSNO Approval: HSR001049: Kerosene

HSNO/HSWA Controls: Refer to the above Group Standard, Health and Safety at Work Act 2015, www.epa.govt.nz and www.worksafe.govt.nz for further information on controls

Certified Handler: Not required

Tracking: Not required

Restriction to workplace: Not applicable

Signage: Threshold quantity: 1,000 L

Fire extinguishers: Threshold quantity: 500 L

Emergency Response Plan: Threshold quantity: 1,000 L

Secondary containment: Threshold quantity: 1,000 L

Other: Location and transit depot test certification: 500 L (closed containers greater than 5 L); 1,500 L (closed containers up to and including 5 L); 250 L (open containers)

Agricultural Compounds and Veterinary Medicines Act 1997 (ACVM): Not applicable

Montreal Protocol on Substances that Deplete the Ozone Layer: Not applicable

Stockholm Convention: Not applicable

Rotterdam Convention: Not applicable

16. OTHER INFORMATION

Reasons for Issue: Update SDS format and company details.

Replaces SDS dated: 13 June 2017

New SDS issue date: 18 January 2019

Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists

AS/NZS: Standards Australia & Standards New Zealand

BCF: Bioconcentration Factor

BEI: Biological Exposure Index

CAS: Chemical Abstracts Service

CCID: Chemical Classification and Information Database

EC₅₀: Effective Concentration, 50 per cent

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

HSNO: Hazardous Substances and New Organisms Act 1996

HSWA: Health and Safety at Work Act 2015

IARC: International Agency for Research on Cancer

IC₅₀: Half Maximal Inhibitory Concentration

LC₅₀: Lethal Concentration, 50 per cent

LD₅₀: Lethal Dose, 50 per cent

LEL: Lower Explosive Limit

LOAEL: Lowest-observed-adverse-effect level

N/R: Not Regulated

NOAEL: No-observed-adverse-effect-level

NOEC: No Observed Effect Concentration

NZIoC: New Zealand Inventory of Chemicals

NZS 5433 New Zealand Standard Transport of Dangerous Goods on Land

OECD: Organisation for Economic Co-operation and Development

STEL: Short-Term-Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

UEL: Upper Explosive Limit

References:

- Supplier Safety Data Sheets
- EPA CCID <https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/>
- Workplace Exposure Standards and Biological Exposure Indices. 9th Edition, published by WorkSafe New Zealand November 2017. <https://worksafe.govt.nz/topic-and-industry/work-related-health/monitoring/exposure-standards-and-biological-exposure-indices>
- US EPA Toxnet ChemIDPlus: <http://chem.sis.nlm.nih.gov/chemidplus> (January 19)
- OECD eChemPortal Substance Search <https://www.echemportal.org/echemportal/participant/page.action?pageID=9>

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact ASCC Limited.