

# Material Safety Data Sheet

Page: 1 of 6

Infosafe No.	SG1E5	Issue Date : April 2006	ISSUED by BPAUST
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Product Name : **Jet A-1**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	Jet A-1
<b>Company Name</b>	BP Australia Pty Ltd (ABN 53 004 085 616)
<b>Address</b>	Melbourne Central, 360 Elizabeth Street, Melbourne, Victoria 3000 Australia
<b>Emergency Tel.</b>	24hr 1800 638 556
<b>Telephone/Fax Number</b>	Tel: 61 3 9268 4111 Fax: (03) 9268-3321
<b>Recommended Use</b>	Aviation turbine fuel
<b>Other Information</b>	BP Technical Helpline: 1300 139 700 (local call)  MSDS website <a href="http://www.msds.bp.com.au/">www.msds.bp.com.au/</a>

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

## 2. HAZARDS IDENTIFICATION

<b>Hazard Classification</b>	HAZARDOUS SUBSTANCE. DANGEROUS GOODS. Hazard classification according to the criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.
<b>Risk Phrase(s)</b>	R10 Flammable. R38 Irritating to skin. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R65 Harmful: may cause lung damage if swallowed.
<b>Safety Phrase(s)</b>	S2 Keep out of reach of children. S23 Do not breathe gas/fumes/vapour/spray S24 Avoid contact with skin. S61 Avoid release to the environment. Refer to special instructions/safety data sheet. S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.
<b>Other Information</b>	Flammable liquid. As the material has a low flash point, any spillage should be considered a potential fire hazard. Spray applications increase the fire, and possible explosion, hazard. Use in hot climates further increases this hazard. This product may be aspirated on swallowing. Product may be irritating to the skin.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Information on Composition</b>	A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the
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# Material Safety Data Sheet

Page: 2 of 6

Infosafe No.	SG1E5	Issue Date : April 2006	ISSUED by BPAUST
--------------	-------	-------------------------	------------------

Product Name : **Jet A-1**

range C9 through C16.  
Kerosine, petroleum 8008-20-6 100 %

## 4. FIRST AID MEASURES

<b>Inhalation</b>	Remove the source of contamination or move the victim to fresh air. Ensure airways are clear and have qualified person give oxygen through a face mask if breathing is difficult. Apply artificial respiration if not breathing. Seek immediate medical attention.
<b>Ingestion</b>	DO NOT INDUCE VOMITING. Wash out mouth with water and give plenty of water to drink. Where vomiting occurs naturally have victim place head below hip level in order to reduce risk of aspiration. Seek immediate medical attention.
<b>Skin</b>	Wash skin thoroughly with soap and water as soon as reasonably practicable. Remove heavily contaminated clothing and wash underlying skin. If irritation occurs seek medical advice.
<b>Eye</b>	If contact with the eye(s) occur, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. In all cases of eye contamination it is a sensible precaution to seek medical advice.
<b>First Aid Facilities</b>	Eye wash and normal washroom facilities.
<b>Advice to Doctor</b>	Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

## 5. FIRE FIGHTING MEASURES

<b>Fire Fighting Measures</b>	For major fires, call the Fire Brigade immediately. Ensure an escape path is always available from any fire. There is a risk of flashback if sparks or hot surfaces ignite vapour. In case of fire, use foam, dry chemical, carbon dioxide, vaporising liquid or water delivered as a fine spray. DO NOT USE water jets. Fires in confined spaces should be dealt with by trained personnel wearing approved breathing apparatus. Water may be used to cool nearby heat exposed areas/objects/packages. Avoid spraying directly into storage containers because of the danger of boil-over.
<b>Hazards from Combustion Products</b>	Toxic fumes may be evolved on burning or exposure to heat.
<b>Hazchem Code</b>	See Stability and Reactivity, Section 10 of this MATERIAL SAFETY DATA Sheet. 3[Y]

## 6. ACCIDENTAL RELEASE MEASURES

<b>Emergency Procedures</b>	Any spillage should be regarded as a potential fire risk. In the event of spillage, remove all sources of ignition and ensure good ventilation. Wear protective equipment. (See Exposure Controls/Personal Protection, Section 8 of this MATERIAL SAFETY DATA SHEET for details) Contain and recover liquid using sand or other suitable inert absorbent material. It is advised that stocks of suitable absorbent material should be held in quantities sufficient to deal with any spillage which may be reasonably anticipated. Spilled material may make surfaces slippery. Clean up spilled material immediately. Recovery of large spillages should be effected by specialist personnel. Protect drains from potential spills to minimise contamination. Do not wash product into drainage system. Vapour is heavier than air and may travel to remote sources of ignition (eg. along drainage systems, in basements, etc.). If spillage has occurred in a confined space, ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry. In the case of spillage on water, prevent the spread of product by the use of suitable barrier equipment. Recover product from the surface. Protect environmentally sensitive areas and water supplies.
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# Material Safety Data Sheet

Page: 3 of 6

Infosafe No.	SG1E5	Issue Date : April 2006	ISSUED by BPAUST
--------------	-------	-------------------------	------------------

Product Name : **Jet A-1**

In case of spillage at sea, approved dispersants may be used where authorised by the appropriate regulatory authority. In the event of spillages, contact the appropriate authorities. Regular surveillance on the location of the spillage should be maintained.

## 7. HANDLING AND STORAGE

<b>Precautions for Safe Handling</b>	<p>Ensure good ventilation and avoid, as far as reasonably practicable, the inhalation and contact with vapours, mists or fumes which may be generated during use. If such vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level.</p> <p>Avoid contact with eyes. If splashing is likely to occur wear a full face visor or chemical goggles as appropriate.</p> <p>Avoid skin contact. Good working practices, high standards of personal hygiene and plant cleanliness must be maintained at all times.</p> <p>Do not siphon product by mouth. Keep out of reach of children.</p> <p>Whilst using, do not eat, drink or smoke. Wash hands thoroughly after contact. Use disposable cloths and discard when soiled. Do not put soiled cloths into pockets.</p> <p>Take all necessary precautions against accidental spillage into soil or water.</p>
<b>Conditions for Safe Storage</b>	<p>Store and dispense only in well ventilated areas away from heat and sources of ignition.</p> <p>Store and use only in equipment/containers designed for use with the product. Containers must be properly labelled and kept closed when not in use.</p> <p>Do not remove warning labels from containers. Empty packages may retain residual product; retain hazard warning labels on empty packages as a guide to their safe handling, storage and disposal.</p> <p>Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations below 1% of the lower flammability limit and an oxygen concentration of at least 20% by volume.</p> <p>Always have sufficient personnel standing by outside the tank with appropriate breathing apparatus and equipment to effect a quick rescue.</p>
<b>Other Information</b>	<p><b>Fire Prevention</b></p> <p>Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards, even at temperatures below the normal flash point.</p> <p>Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electricity discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Hoses should be electrically continuous.</p> <p>Ensure equipment used is properly earthed or bonded to the tank structure.</p> <p>Will present a flammability hazard if heated above the flash point but bulk liquids at normal storage temperatures present a low fire hazard.</p> <p>If fuel contacts hot surfaces, or leaks from high pressure fuel pipes, the vapour and/or mists generated will create a flammability or explosion hazard. Product soaked rags, paper or material used to absorb spillages, represent a fire hazard and should not be allowed to accumulate. Dispose of safely after use. Empty containers represent a fire hazard as they may contain remaining flammable residues and vapour.</p> <p>Do not weld, heat or drill the container. Do not introduce an ignition source. Heating may cause an explosion.</p>

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>National Exposure Standards</b>	<p>Ensure good ventilation.</p> <p>Avoid, as far as reasonably practicable, inhalation of vapour, mists or fumes generated during use.</p> <p>If vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level.</p>
<b>Biological Limit Values</b>	<p>No biological limit allocated.</p>
<b>Respiratory Protection</b>	<p>If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependent upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances.</p>

# Material Safety Data Sheet

Page: 4 of 6

Infosafe No.	SG1E5	Issue Date : April 2006	ISSUED by BPAUST
--------------	-------	-------------------------	------------------

Product Name : **Jet A-1**

Expert advice may be required to make this decision. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

**Eye Protection** Safety glasses with side shields, goggles or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances ie. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

**Hand Protection** Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances ie. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Pale yellow / straw coloured mobile liquid
<b>Odour</b>	Mild
<b>Melting Point</b>	Not available
<b>Boiling Point</b>	150 - 280°C Test Method: ASTM D 86
<b>Solubility in Water</b>	Insoluble
<b>pH Value</b>	Not applicable
<b>Vapour Pressure</b>	< 0.3 kPa @ 38°C Test Method: ASTM D 323
<b>Vapour Density (Air=1)</b>	Not available
<b>Density</b>	0.80 kg/L @ 15°C Test Method: ASTM D 1298
<b>Flash Point</b>	> 38°C (PMC) Test Method: ASTM D 93
<b>Flammability</b>	FLAMMABLE. This product should be stored and used in a well ventilated area away from naked flames, sparks and other sources of ignition. Electrically link and ground metal containers for transfers of the product to prevent accumulation of static electricity. Keep the container tightly closed.
<b>Auto-Ignition Temperature</b>	380°C
<b>Flammable Limits - Lower</b>	0.7%
<b>Flammable Limits - Upper</b>	5.0%

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Products of this type are stable and unlikely to react in a hazardous manner under normal conditions of use. This material is flammable.
<b>Conditions to Avoid</b>	Heat, flames and other ignition sources.
<b>Incompatible Materials</b>	Avoid contact with strong oxidising agents.
<b>Hazardous Decomposition Products</b>	Thermal decomposition can produce a variety of compounds, the precise nature of which will depend on the decomposition conditions. Incomplete combustion/thermal decomposition will generate smoke, carbon dioxide and hazardous gases, which will include carbon monoxide.
<b>Hazardous Polymerization</b>	Hazardous polymerisation reactions will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicology Information</b>	No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC), the European Commission (EC), or the National Occupational Health and Safety Commission (Australia).
<b>Inhalation</b>	May cause irritation to eyes, nose and throat due to exposure to high concentrations of vapour, mists or fumes.

# Material Safety Data Sheet

Infosafe No.	SG1E5	Issue Date : April 2006	ISSUED by BPAUST
--------------	-------	-------------------------	------------------

Product Name : **Jet A-1**

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<b>Ingestion</b>	Harmful: may cause lung damage if swallowed. Ingestion of this product will irritate the gastric tract causing nausea and vomiting. Aspiration into the lungs may result in chemical pneumonitis.
<b>Skin</b>	Likely to cause skin irritation.
<b>Eye</b>	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
<b>Chronic Effects</b>	<p>Middle distillate: From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests, the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact with this product in the absence of good personal hygiene. This particular product has not been tested for carcinogenic activity, but we have chosen to be cautious in light of the findings with other distillate streams.</p> <p>Occasional skin contact with this product is not expected to have serious effects, but good personal hygiene should be practiced and repeated skin contact avoided. This product can also be expected to produce skin irritation upon prolonged or repeated skin contact. Personal hygiene measures taken to prevent skin irritation are expected to be adequate to prevent risk of skin cancer.</p>

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## 12. ECOLOGICAL INFORMATION

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<b>Persistence / Degradability</b>	This product is inherently biodegradable.
<b>Mobility</b>	Spillages may penetrate the soil causing ground water contamination.
<b>Bioaccumulative Potential</b>	This product is not expected to bioaccumulate through food chains in the environment.
<b>Environ. Protection</b>	Prevent this material entering waterways, drains and sewers.
<b>Acute Toxicity - Other Organisms</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

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## 13. DISPOSAL CONSIDERATIONS

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<b>Disposal Considerations</b>	<p>Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations, or if approved, allowed to degrade in situ. Incineration may be carried out under controlled conditions provided that local regulations for emissions are met.</p> <p>Dispose of product and container carefully and responsibly. Do not dispose of near ponds, ditches, down drains or onto soil.</p> <p>Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packages and should not be removed.</p>
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## 14. TRANSPORT INFORMATION

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<b>Transport Information</b>	ADG - FUEL, AVIATION, TURBINE ENGINE, UN 1863, Class 3 - Flammable Liquid , Packaging Group III, 3[Y]. IMDG - KEROSENE , UN 1223, Class 3.3 - Flammable Liquid, Packaging Group III. IATA/ICAO - FUEL, AVIATION, TURBINE ENGINE, UN 1863, Class 3 - Flammable Liquid, Packaging Group III.
<b>U.N. Number</b>	1863
<b>Proper Shipping Name</b>	FUEL, AVIATION TURBINE ENGINE
<b>DG Class</b>	3
<b>Hazchem Code</b>	3[Y]
<b>Packaging Method</b>	3.8.3RT1
<b>Packing Group</b>	III
<b>EPG Number</b>	3A1
<b>IERG Number</b>	14

# Material Safety Data Sheet

Page: 6 of 6

Infosafe No.	SG1E5	Issue Date : April 2006	ISSUED by BPAUST
--------------	-------	-------------------------	------------------

Product Name : **Jet A-1**

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## 15. REGULATORY INFORMATION

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<b>Regulatory Information</b>	Fuels are exempt from the Standard Uniform Schedule for Drugs and Poisons, except when packed in containers having a capacity of 20 litres or less. Classified as a Scheduled 5 (S5) Poison using the criteria in the Standard Uniform Schedule for Drugs and Poisons when used for other applications rather than as a fuel.
<b>Poisons Schedule</b>	S5
<b>Hazard Category</b>	Harmful, Irritant, Dangerous for the environment

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## 16. OTHER INFORMATION

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<b>Date of preparation or last revision of MSDS</b>	MSDS Review: March 2006 Supersedes: March 2001
<b>Other Information</b>	Compiled by: Health, Safety, Environment and Security Division, ...End Of MSDS...