

Material Safety Data Sheet

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Infosafe No.	YSTNZ	Issue Date : July 2003	ISSUED by BPAUST
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Product Name : **Avgas 100 LL**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name	Avgas 100 LL
Product Use	Fuel for spark ignition aviation engines. Should NOT be used as a solvent or cleaning agent. Do not use in petrol stoves.
Company Name	BP Australia Pty Ltd (ABN 53 004 085 616)
Address	Melbourne Central, 360 Elizabeth Street, Melbourne, Victoria 3000 Australia
Emergency Tel.	24hr 1800 638 556
Telephone	Tel: 61 3 9268 4111 Fax: (03) 9268-3321
Number/Fax	
Other Information	<p>This data sheet and the health, safety and environmental information it contains is considered to be accurate as of the date specified below. We have reviewed any information contained herein which we received from sources outside the BP Group of Companies. However, no warranty or representation, expressed or implied is made as to the accuracy or completeness of the data and information contained in this data sheet.</p> <p>Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission, recommendation or authorization given or implied to practise any patented invention without a valid licence. The BP Group shall not be responsible for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.</p>

2. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Composition	A complex combination of volatile hydrocarbons containing paraffins, olefins and aromatics with carbon numbers predominantly between C4 and C12. CAS No.68425-29-6. May contain small quantities of performance enhancing additives.		
	Hazardous Components		
	The following components, considered by various legislative authorities to be hazardous, may also be present:		
	Benzene	CAS No. 71-43-2	< 2%
	Tetraethyl lead	CAS No. 78-00-2	0.05% to 0.15% (0.56 g Pb/L max.)

3. HAZARDS IDENTIFICATION

Highly flammable liquid. Explosive air/vapour mixtures may form at ambient temperature.

Vapour is heavier than air and may travel to remote sources of ignition (eg. along drainage systems, in basements etc.).

Abuse involving wilful inhalation of very high concentrations of vapour, even for short periods, can produce unconsciousness or may be fatal.

Misuse of product may cause lead poisoning.

4. FIRST AID MEASURES

Inhalation	<p>If exposure to vapour, mists, or fumes causes drowsiness, headache, blurred vision or irritation of the eyes, nose or throat, remove the source of contamination or move the victim to fresh air. Ensure airways are clear and have qualified person give oxygen through a facemask if breathing is difficult. Apply artificial respiration if not breathing. Seek medical attention.</p> <p>Unconscious patients must be placed in the recovery position.</p> <p>Monitor breathing and pulse rate and if breathing has failed, or is deemed inadequate, respiration must be assisted, preferably by the mouth-to-mouth method (expired air resuscitation).</p> <p>Administer external cardiac massage if necessary. Seek medical attention immediately.</p>
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Ingestion	If swallowed, do not induce vomiting, give a glass of water and contact a doctor or Poisons Information Centre immediately. Except as a deliberate act, the ingestion of large amounts of product is unlikely. If it should occur, do NOT induce vomiting; obtain medical advice.
Skin	Wash skin thoroughly with soap and water as soon as reasonably practicable. Remove heavily contaminated clothing and wash underlying skin. In extreme situations of saturation with this product, drench with water, remove clothing as soon as possible and wash skin with soap and water. Seek medical advice if skin becomes red, swollen or painful.
Eye	Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists.
Advice to Doctor	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

	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. Any spillage should be regarded as a potential fire risk.
Hazardous Combustion Products	Toxic fumes may be evolved on burning or exposure to heat. See Stability and Reactivity, Section 10 of this MATERIAL SAFETY DATA Sheet.

6. ACCIDENTAL RELEASE MEASURES

As the product has a very low flash point, any spillage or leak is a severe fire and/or explosion hazard.
Isolate the spillage from all ignition sources including road traffic.
Ensure good ventilation.
Evacuate all non-essential personnel from the immediate area.
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.
Clean up spilled material immediately.
Protect drains from potential spills to minimise contamination.
Do not wash product into drainage system.
Recovery of large spillages should be effected by specialist personnel.
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.
In the event of spillages, contact the appropriate authorities. Regular surveillance on the location of the spillage should be maintained.

7. HANDLING AND STORAGE

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Handling	<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.</p> <p>Keep out of the reach of children.</p> <p>Whilst using, do not eat, drink or smoke. Wash hands thoroughly after contact.</p> <p>Take all necessary precautions against accidental spillage into soil or water.</p>
Storage	<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 and comply with Company requirements for entry into a leaded tank. The tank must be 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>
Other Information	<p>Fire Prevention</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.</p> <p>Hoses should be electrically continuous and ensure equipment used is properly earthed or bonded to the tank structure.</p> <p>Explosive air/vapour mixtures may form at ambient temperature.</p> <p>If fuel comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or explosion hazard.</p> <p>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.</p> <p>Empty containers represent a fire hazard as they may contain remaining flammable residue and vapour. Heating may cause an explosion.</p> <p>Do not weld, heat or drill this container. Do not introduce an ignition source.</p>

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits	<p>Ensure good ventilation. 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> <p>The Australian National Occupational Health And Safety Commission (NOHSC) recommend an Exposure Standard for an 8-hour time-weighted average exposure (TWA) of 5 ppm (16 mg/m³) for benzene, 5 mg/m³ for oil mist and 0.15 mg/m³ for lead, inorganic dusts and fumes, (as Pb).</p>
Respiratory Protection	<p>If operations are such that exposure to vapour, mist or fume may be anticipated, then suitable approved respiratory equipment should be worn.</p> <p>The use of respiratory equipment must be strictly in accordance with the manufacturers' instructions and any statutory requirements governing its selection and use.</p>

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Body Protection	Wear face visor or goggles in circumstances where eye contact can accidentally occur. If skin contact is likely, wear impervious protective clothing and/or gloves. Change heavily contaminated clothing as soon as reasonably practicable and launder before re-use. Thoroughly wet down before removing clothing due to the risk of static discharge igniting vapour. Wash any contaminated underlying skin with soap and water.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Odour	Strong
Boiling Point	40°C to 170°C Test Method: ASTM D 86
Vapour Pressure	38 kPa to 49 kPa @ 20°C Test Method: ASTM D 323
Physical State	Mobile Liquid
Colour	Blue
Density	0.70 kg/L @ 15°C Test Method: ASTM D 1298
Flash Point	< -40°C (PMC) Test Method: ASTM D 93
Flammable Limits	1.4%
LEL	
Flammable Limits	7.6%
UEL	
Other Information	Grades: Avgas 100 LL

10. STABILITY AND REACTIVITY

Hazardous Polymerization	Hazardous polymerisation reactions will not occur.
Materials to Avoid	Avoid contact with strong oxidizing agents.
Hazardous Decomposition Products	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 and toxic fumes of lead and lead oxides.
Conditions to Avoid	Products of this type are stable and unlikely to react in a hazardous manner under normal conditions of use. This material is highly flammable.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	Abuse involving deliberate inhalation of very high concentrations of vapour, even for short periods, can produce unconsciousness and/or result in sudden fatality. For further toxicological information, see references to Other Information, Section 16 of this MATERIAL SAFETY DATA SHEET.
Inhalation	Toxic by inhalation. Likely to be irritating to the respiratory tract if high concentrations of mist or vapour are inhaled. May cause anorexia, nausea, vomiting, diarrhoea, delirium, nervous irritability, headache, restlessness, pallor, tremor, euphoria, lethargy, insomnia, slurred speech, blurred vision, central nervous system depression (including ataxia, tremor and hypotonia), bradycardia and decreased body temperature.
Ingestion	Toxic if swallowed. Ingestion of this product will irritate the gastric tract causing nausea, vomiting, anorexia, weight loss or diarrhoea. Other symptoms are similar to that for inhalation. Harmful if swallowed; may cause lung damage. Aspiration into the lungs may result in chemical pneumonitis.
Skin	Toxic in contact with skin. After skin absorption of this product, lead poisoning may occur. Symptoms of lead poisoning are similar to that for inhalation.
Eye	May cause eye irritation, redness, tearing, pain, burns, blurred vision and conjunctivitis.

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Chronic Effects	<p>It is important to recognise that this product is classified as a Category 1 Carcinogen according to National Occupational Health And Safety Commission (NOHSC). That is, there is sufficient evidence to establish a causal association between human exposure and the development of cancer on the basis of epidemiological data.</p> <p>May cause harm to the unborn child. May cause CNS and developmental defects in children of women who have deliberately inhaled very high concentrations of vapour.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Chronic exposure to this product may cause systemic toxicity, including adverse effects to the following; kidney, liver, spleen, pancreas, lymphoid tissue, pituitary, thyroid, adrenals, thymus and respiratory and CNS effects.</p>
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12. ECOLOGICAL INFORMATION

Mobility	Spillages may penetrate the soil causing ground water contamination.
Persistence / Degradability	This product is inherently biodegradable.
Bioaccumulation	There is no evidence to suggest bioaccumulation will occur.
Acute Toxicity - Other Organisms	<p>May be harmful to aquatic organisms.</p> <p>Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.</p>

13. DISPOSAL CONSIDERATIONS

Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations, or if approved, allowed to degrade in situ. Dispose of product and container carefully and responsibly. Do not dispose of near ponds, ditches, down drains or onto soil.

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.

Empty packages represent a fire explosion hazard as they may contain flammable product residues and vapour. Do not weld, heat or drill the container. Heating may cause an explosion.

Do not introduce an ignition source.

Materials contaminated with product should be treated as highly flammable.

Disposal should be in accordance with local regulations.

Small quantities of spilled liquid may be allowed to evaporate, but the vapour must be dispersed by efficient ventilation.

14. TRANSPORT INFORMATION

	ADG - AVIATION GASOLINE, UN 1203, Class 3 - Flammable Liquid, Packaging Group II, 3(Y)E.
	IMDG - MOTOR SPIRIT, UN 1203, Class 3.1 - Flammable Liquid, Packaging Group II, MARINE POLLUTANT (Leaded Petrol), UN 1203.
	IATA/ICAO - PETROL, UN 1203, Class 3 - Flammable Liquid, Packaging Group II.
U.N. Number	1203
Proper Shipping Name	GASOLINE
DG Class	3
Hazchem Code	3[Y]E
Packaging Method	5.9.3RT1
Packing Group	II
IERG Number	14

15. REGULATORY INFORMATION

Classified as a Toxic hazardous substance using the Australian National Occupational Health And Safety Commission (NOHSC) criteria.

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.

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Risk Phrase	R11 Highly flammable. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R38 Irritating to skin. R45(1) May cause cancer. R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. R61(1) May cause harm to the unborn child R65 Harmful: may cause lung damage if swallowed.
Safety Phrase	S2 Keep out of reach of children. S23 Do not breathe gas/fumes/vapour/spray S24 Avoid contact with skin. S29 Do not empty into drains. S43 In case of fire, use foam, dry chemical, CO2, vapourising liquid or water delivered as a fine spray S45 In case of accident or if you feel unwell seek medical advice immediately S46 If swallowed, seek medical advice immediately and show this container or label. If swallowed, do not induce vomiting. Give a glass of water. S53 Avoid exposure - obtain special instructions before use. S60 This material and its container must be disposed of as hazardous waste.
Hazard Category	Toxic,Irritant,Highly Flammable

16. OTHER INFORMATION

	Compiled by: Health, Safety, Environment and Security Division.
Contact Person/Point	BP Australia Limited, A.C.N. 004 085 616 Melbourne Central 360 Elizabeth Street, Melbourne, 3000 Victoria ...End Of MSDS...