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NOHSC 16 Section

Material Safety Data Sheet

VORTEX 95

Infosafe™ HXD02 **Issue Date** April 2011 **Status** ISSUED by BS:
No. CALTEX 1.10.9

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name VORTEX 95

Company Name Caltex Australia Petroleum Pty Ltd (ABN 17 000 032 128)

Address 2 Market Street, Sydney
NSW 2000

Emergency Tel. 1800 033 111

Telephone/Fax Number Tel: (02) 9250 5000
Fax: (02) 9250 5742

Recommended Use Fuel.

Other Names Not Available

Other Information The most recent MSDS for this product can be obtained from the Caltex Australia website - 'www.caltex.com.au'.

2. HAZARDS IDENTIFICATION

Hazard HAZARDOUS SUBSTANCE.
Classification DANGEROUS GOODS.

Hazard classification according to the criteria of NOHSC.
 Dangerous goods classification according to the Australia
 Dangerous Goods Code.

Risk Phrase(s) R11 Highly flammable.
 R38 Irritating to skin.
 R65 Harmful: may cause lung damage if swallowed.
 R45(1) May cause cancer.
 R46(2) May cause heritable genetic damage.
 R48/20/21/22 Harmful: danger of serious damage to health by
 prolonged exposure through inhalation, in contact with skin
 and if swallowed.

Safety Phrase S2 Keep out of reach of children.
(s) S16 Keep away from sources of ignition - No smoking.
 S33 Take precautionary measures against static discharges.
 S62 If swallowed, do not induce vomiting; seek medical
 advice immediately and show this container or label.
 S37/39 Wear suitable gloves and eye/face protection.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Petroleum Hydrocarbon	8006-61-9	90-100 %
	Benzene	71-43-2	0-1 %

4. FIRST AID MEASURES

Inhalation If inhaled, remove affected person from contaminated area.
 Apply artificial respiration if not breathing. Seek medical
 attention.

Ingestion	Do NOT induce vomiting. Wash out mouth and lips with water. Where vomiting occurs naturally have affected person place head below hip level in order to reduce risk of aspiration. Seek immediate medical attention.
Skin	Remove all contaminated clothing. Wash gently and thoroughly with water and non-abrasive soap. Ensure contaminated clothing is washed before re-use or discard. Seek medical attention.
Eye	If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.
First Aid Facilities	Eye wash fountain, safety shower and normal washroom facilities.
Advice to Doctor	Treat symptoms with reference to specific health effects.
Other Information	For advice in an emergency, contact a Poisons Information Centre (Phone Australia 13 1126) or a doctor at once.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use carbon dioxide, dry chemical or foam.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Specific Hazards	Highly flammable liquid and vapour. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard.
Hazchem Code	3YE

Precautions in connection with Fire Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. Heat will increase pressure of closed storage containers and may rupture/explode. Keep storage tanks, pipelines, fire exposed surfaces etc cool with water spray. This product should be prevented from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling Wear appropriate protective clothing and equipment to prevent inhalation, skin and eye exposure. Handle and use the material in a well-ventilated area, away from sparks, flames and other ignition sources. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Work from suitable, labelled, fire-resistant containers. Open containers carefully as they may be under pressure. Keep containers closed when not in use. Flameproof equipment is necessary in areas where the product is being used. Take precautionary measures against static discharges. Earth or bond all equipment. Do not empty into drains. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet facilities.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing. Keep containers closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids. Reference should also be made to all applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC), Australia. However, the available exposure limits for ingredients are listed below:

National Occupational Health And Safety Commission (NOHSC), Australia Exposure Standards:

Substance TWA STEL

ppm mg/m³ ppm mg/m³

Petroleum hydrocarbon - 900 - -

Benzene (liquid) 1 3.2 - -

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
 STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Biological Limit Values Biological Exposure Indices BEI from American Conference of Industrial Hygienists (ACGIH) for ingredients are as follows:

Determinant Sampling Time Biological Exposure:
 BENZENE[71-43-2]
 S-Phenylmercapturic acid in End of shift 25 ug/g creatinine urine
 t,t-Muconic acid in urine End of shift 500 ug/g creatinine

Engineering Controls

Provide sufficient ventilation to keep airborne levels below the exposure limits. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flameproof exhaust ventilation system is required. Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1:2009 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable organic vapour filter should be used. 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, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields, goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. 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

Impervious (Neoprene or nitrile rubber) gloves recommended as appropriate. Final choice of appropriate gloves will vary according to individual circumstances i.e. 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.

Body Protection

Suitable protective work wear, e.g. impervious overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Yellow liquid

Odour	Not available
Melting Point	Not applicable
Boiling Point	30 - 205°C
Solubility in Water	Insoluble in water.
Specific Gravity	0.74
pH Value	Not Applicable
Vapour Pressure	80 kPa at 40°C 67 kPa max (at 37.8°C) in Adelaide, Brisbane and Perth 62 kPa max (at 37.8°C) in Sydney and Melbourne
Vapour Density (Air=1)	3.5 (cf Air = 1)
Evaporation Rate	Not available
Viscosity	Not available
Flash Point	-40°C
Flammability	Highly flammable liquid. Eliminate all ignition sources. Use only flameproof electrical equipment. Internal Combustion engines are not permitted for pumping. Earth containers when transferring product. Do not use plastic tubing or containers.
Auto-Ignition Temperature	370°C
Flammable Limits - Lower	1.4%

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage and handling.
Conditions to Avoid	Heat and other sources of ignition.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Hazardous Polymerization	Will not occur

11. TOXICOLOGICAL INFORMATION

Toxicology Information	<p>Limited chronic inhalation toxicology studies showed kidney disease, kidney cancer, and liver cancer in animals following exposure to wholly vapourised petrol. Additional studies limited to the volatile fraction of petrol have not resulted in kidney damage, which is generally considered to be a precursor to kidney cancer. Many scientists do not believe that the male rat is an appropriate animal model or predictor of human kidney cancer.</p> <p>Epidemiology studies in humans exposed to hydrocarbons have not indicated excess risk of kidney or liver cancer. Petrol contains benzene in concentrations from about 0.5 to 4.0 %. Chronic toxicology studies in laboratory animals and certain epidemiology studies have indicated that excessive benzene exposure may cause cancer of the blood-forming organs including leukaemia. While the benzene content of petrol is relatively low, it is important to minimise exposure to the skin and respiratory system to well within current exposure standards. Engineering controls including full enclosure, vapour recovery, or local exhaust ventilation are recommended where routine exposure may exceed applicable standards.</p>
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- Inhalation** Vapours may cause headache, nausea with vomiting, dizziness, confusion and other effects of central nervous system depression. Loss of consciousness can occur at high concentrations followed by convulsions and death.
- Ingestion** May cause irritation to the gastrointestinal system. Symptoms may include abdominal pain, nausea, vomiting, diarrhoea or depression of the central nervous system including nausea, headaches, dizziness, fatigue, loss of coordination, unconsciousness and possibly narcosis. Small amounts of liquid aspirated into the respiratory system during ingestion or vomiting may lead to aspiration into the lungs with a possibility of chemical pneumonia or lung damage.
- Skin** Harmful and irritating in contact with skin. Skin contact will cause redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.
- Eye** May be irritating to eyes. The symptoms may include redness, itching and tearing.
- Chronic Effects** Prolonged and repeated exposure through inhalation or swallowing of this material can result in harmful effects including central nervous system effects. Systemic effects of chronic exposure can also include damage to heart, kidneys and liver. Prolonged or repeated skin contact may also result in skin irritation leading to dermatitis.
- Mutagenicity** This material is classified as a Category 2 Mutagen according to National Occupational Health And Safety Commission (NOHSC). That is, there is sufficient evidence, generally on the basis of appropriate animal studies and other relevant information, to provide a strong presumption that human exposure can result in the development of heritable genetic damage. Category 2 Mutagens are substances that should be regarded as if they are mutagenic to humans.

Carcinogenicity This substance 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 to this substance and the development of cancer. Category 1 Carcinogens are substances known to be carcinogenic to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicity No data is available for this material.

Persistence / Degradability No data is available for this material.

Mobility No data is available for this material.

Environment Protection Do not discharge this material into waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations Dispose of waste according to applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near containers. Empty containers may contain hazardous residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers. Advise flammable nature.

14. TRANSPORT INFORMATION

Transport Information

This material is a Class 3 - Flammable Liquid according to The Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Class 3 - Flammable Liquids are incompatible in a placard load with any of the following:

- Class 1, Explosives
- Division 2.1, Flammable Gases, (Division 2.1 and Class 3 are incompatible in transport if both are in tanks or other receptacles with a capacity individually exceeding 500 L.)
- Division 2.3, Toxic Gases
- Division 4.2 Spontaneously Combustible Substances
- Division 5.1 Oxidising Agents and Division 5.2, Organic Peroxides
- Class 6 Toxic or Infectious Substances (where the flammable liquid is nitromethane)
- Class 7 Radioactive Substances.

U.N. Number 1203

Proper Shipping Name MOTOR SPIRIT

DG Class 3

Hazchem Code 3YE

Packing Group II

EPG Number 3.1.001

IERG Number 14

15. REGULATORY INFORMATION

Regulatory Information

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia. Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule

Not Scheduled

Hazard Category Toxic, Irritant, Highly Flammable

AICS (Australia) All components of this product are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Date of preparation or last revision of MSDS MSDS Reviewed: April 2011
Supersedes: June 2006

Contact Person/Point CHEMICAL EMERGENCIES: 1 800 033 111
TECHNICAL ADVICE: 1300 364 169

Health & Safety Advisor

Tel: (02) 9250 5822 and (02) 9250 5734

PLEASE NOTE that although every care has been taken in compiling the above information, it is solely reliant upon data available to us at the date hereof. We believe the data to be correct, however for the reason just stated we are not in a position to warrant its accuracy. With that in mind and given that the full range of possibilities and conditions under which the information may be applied simply cannot be anticipated, YOU ARE CAUTIONED to make your own determinations as to the veracity and the suitability of the information to the particular circumstances that apply, or may apply, to you from time to time. Consistent with that approach it is recommended that where you have a particular purpose which would necessitate a reliance on information of the nature herein you obtain your own independent expert advice particularly structured to the relevant purpose. If this material is printed, circulated, distributed or copied in any manner, it is not to be modified without prior written permission, and further, it is to include the wording of the above disclaimer.

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