

Section 1 - Identification of Chemical Product and Company

Freedom Fuels Australia Pty Ltd

8/16 Theodore St

Eagle farm, Qld 4009

Phone: 07 3268 5077

Fax: 07 3268 6477

Email: info@freedomfuels.com.au

ABN 49 093 244 761

Emergency Contacts:

| | |
|---------------------------|--------------|
| Transport & Terminalling | 0400 334 634 |
| Retail: | 0448 132 812 |
| Workplace Health & Safety | 0407 599 508 |

Substance: Contains 90% Unleaded petrol and Ethanol 10%

Trade Name: **E10 Hi Octane 98/Elite 98**

Product Use: Use only as motor fuel for spark ignition petrol engines. NOT for aviation use OR to be used as a solvent OR cleaning agent.

Creation Date: **July, 2009**

This version issued: **July, 2009** and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. F+, Extremely Flammable. Hazardous according to the criteria of SWA.

Dangerous according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: R38, R45, R46, R63, R65, R67. Irritating to skin. May cause cancer. May cause heritable genetic damage. Possible risk of harm to the unborn child. Harmful: May cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.

Safety Phrases: S2, S16, S23, S29, S33, S39, S45, S61, S24/25, S36/37. Keep out of reach of children. Keep away from sources of ignition - No smoking. Do not breathe vapours. Do not empty into drains. Take precautionary measures against static discharges. Wear eye/face protection. In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show this MSDS where possible). Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves.

SUSDP Classification: None allocated.

ADG Classification: Class 3: Flammable liquids.

UN Number: 1203, MOTOR SPIRIT or GASOLINE or PETROL

Emergency Overview

Physical Description & Colour: Purple or bronze coloured liquid.

Odour: Characteristic strong aromatic petrol odour.

Major Health Hazards: may cause cancer, may cause heritable genetic damage, skin irritant, possible risk of harm to the unborn child, if aspirated, may cause lung damage, vapours may cause drowsiness and dizziness.

Potential Health Effects

Inhalation:

Material Safety Data Sheet

Short Term Exposure: Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure:

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Because of the low viscosity of this product, it may directly enter the lungs if swallowed, or if subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: Benzene is classified by SWA as a Class 1 Carcinogen, known to be carcinogenic to humans.

Gasoline is classified by SWA as a Class 2 Carcinogen, likely to be carcinogenic to humans.

See the SWA website for further details. A web address has not been provided as addresses frequently change.

NTP: Benzene is classified by NTP as known to be carcinogenic to humans.

See the NTP website for further details. A web address has not been provided as addresses frequently change.

IARC: Benzene is classed 1 by IARC - carcinogenic to humans.

Methyl Tert-butyl Ether is Class 3 - unclassifiable as to carcinogenicity to humans.

See the IARC website for further details. A web address has not been provided as addresses frequently change.

Section 3 - Composition/Information on Ingredients

| Ingredients | CAS No | Conc,% | TWA (mg/m ³) | STEL (mg/m ³) |
|---|------------|--------|--------------------------|---------------------------|
| Gasoline | 86290-81-5 | 90 | not set | not set |
| Ethanol | 64-17-5 | 10 | 1880 | not set |
| Also contains: | | | | |
| Benzene | 71-43-2 | <1 | 3.2 | not set |
| tert-butyl alcohol | 75-65-0 | <1 | 303 | 455 |
| Methyl tert-butyl ether | 1634-04-4 | <1 | 92 | 275 |
| Isopropyl ether | 108-20-3 | <1 | 1040 | 1300 |
| Polycyclic aromatic hydrocarbons (PAHs) | mixture | <1 | not set | not set |

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

MATERIAL SAFETY DATA SHEET

Issued by: Freedom Fuels Australia Pty Ltd. Phone: 07 3268 5077.

Emergency contacts: Transport & Terminalling: 0400 334 634; Retail: 0448 132 812; Workplace Health & Safety: 0407 599 508

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



performance with responsibility

Material Safety Data Sheet

Inhalation: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Quickly and gently blot away excess liquid. Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Eye Contact: Quickly and gently blot material from eyes. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire. Firefighters should take care and appropriate precautions. Any explosion will likely spread the fire to surrounding materials. Water spray may be used to cool drums involved in a fire, reducing the chances of an explosion.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Suitable extinguishing media are carbon dioxide, dry chemical, foam, water fog. Normal foam, i.e. protein based foam that is not alcohol resistant, is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses. Runoff to a sewer may create fire or explosion hazard. Avoid the use of water jet.

Fire Fighting: Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

Flash point: -40°C, PMCC ASTM D93

Upper Flammability Limit: 7.6%

Lower Flammability Limit: 1.4%

Autoignition temperature: >350°C

Flammability Class: Extremely Flammable

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Immediately call the Fire Brigade. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include Viton, Nitrile, neoprene. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. It should be fitted with a type AX cartridge, suitable for low boiling point organic compounds. See manufacturer's specifications for detailed specifications.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Avoid using sawdust or other combustible material. Any electrical equipment should be non-sparking. Any equipment capable of building an electrostatic charge should be electrically grounded. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed.

MATERIAL SAFETY DATA SHEET

Issued by: Freedom Fuels Australia Pty Ltd. Phone: 07 3268 5077.

Emergency contacts: Transport & Terminalling: 0400 334 634; Retail: 0448 132 812; Workplace Health & Safety: 0407 599 508

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



performance with responsibility

Material Safety Data Sheet

The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: Store in a cool, well ventilated area, and make sure that surrounding electrical devices and switches are suitable. Check containers periodically for leaks. Containers should be kept closed in order to minimise contamination and possible evaporation. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 2500kg or L of Dangerous Goods of Packaging Group II, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label. Retain hazard warning labels on empty packages as a guide to the safe handling, storage and disposal of empty packaging.

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 of less than 1% of the lower flammability limit and an oxygen concentration of at least 20% volume. Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards given at temperatures below the normal flash point (note flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure. If product 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. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use. This product must be handled in compliance with Australian Standard. The storage and handling of flammable and combustible liquids (Standard 1940-2004 as amended and adapted)

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

| SWA Exposure Limits | TWA (mg/m ³) | STEL (mg/m ³) |
|-------------------------|--------------------------|---------------------------|
| Ethanol | 1880 | not set |
| Benzene | 3.2 | not set |
| tert-butyl alcohol | 303 | 455 |
| Methyl tert-butyl ether | 92 | 275 |
| Isopropyl ether | 1040 | 1300 |

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: Viton, nitrile, neoprene.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Safety deluge showers should, if practical, be provided near to where this product is being used.

Section 9 - Physical and Chemical Properties:

| | |
|---|--|
| Physical Description & colour: | Purple or bronze coloured liquid. |
| Odour: | Characteristic strong aromatic petrol odour. |
| Boiling Point: | 30-230°C at 100kPa |
| Freezing/Melting Point: | No specific data. Liquid at normal temperatures. |

MATERIAL SAFETY DATA SHEET

Issued by: Freedom Fuels Australia Pty Ltd. Phone: 07 3268 5077.

Emergency contacts: Transport & Terminalling: 0400 334 634; Retail: 0448 132 812; Workplace Health & Safety: 0407 599 508

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



performance with responsibility

Material Safety Data Sheet

| | |
|--------------------------------------|-------------------------------|
| Volatiles: | Completely volatile at 200°C. |
| Vapour Pressure: | No data. |
| Vapour Density: | No data. |
| Specific Gravity: | 0.735 at 15°C |
| Water Solubility: | Insoluble. |
| pH: | No data. |
| Volatility: | No data. |
| Odour Threshold: | No data. |
| Evaporation Rate: | No data. |
| Coeff Oil/water Distribution: | No data |
| Autoignition temp: | >350°C |

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Keep containers and surrounding areas well ventilated. Keep away from sources of sparks or ignition. Handle and open containers carefully. Any electrical equipment in the area of this product should be flame proofed.

Incompatibilities: strong oxidising agents.

Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Local Effects:

Target Organs: There is no data to hand indicating any particular target organs.

This product may cause heritable genetic damage. Women who are pregnant or who are likely to become pregnant in the near future should avoid using this product.

Benzene is a SWA Class 2 Mutagen, likely to be mutagenic to humans.

Classification of Hazardous Ingredients

| Ingredient | Risk Phrases |
|------------|------------------------------|
| Gasoline | Conc>=10%: T; R45; R46; R65 |
| Benzene | >=0.1%Conc<0.5%: T; R45; R46 |

Section 12 - Ecological Information

This product is biodegradable. It will not accumulate in the soil or water or cause long term problems due to its volatility. Spills may form a film on water surfaces causing physical damage to organisms until evaporation is complete. Oxygen transfer could also be impaired.

Section 13 - Disposal Considerations

Disposal: This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Materials contaminated with product should be treated as extremely flammable.

MATERIAL SAFETY DATA SHEET

Issued by: Freedom Fuels Australia Pty Ltd. Phone: 07 3268 5077.

Emergency contacts: Transport & Terminalling: 0400 334 634; Retail: 0448 132 812; Workplace Health & Safety: 0407 599 508

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



performance with responsibility

Material Safety Data Sheet

Section 14 - Transport Information

ADG Code: 1203, MOTOR SPIRIT or GASOLINE or PETROL

Hazchem Code: 3YE

Special Provisions: 243

Limited quantities: ADG 7 specifies a Limited Quantity value of 1 L for this class of product.

Dangerous Goods Class: Class 3: Flammable liquids.

Packaging Group: II

Packaging Method: P001, IBC02

Class 3 Flammable Liquids shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 2.1 (Flammable Gases where flammable liquids and flammable gases are both in bulk), 2.3 (Toxic Gases), 4.2 (Spontaneously Combustible Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), 6 (Toxic Substances, except Flammable Liquid is nitromethane), and 7 (Radioactive Substances). They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.1 (Flammable Gases except where the Flammable Liquids and Flammable Gases are in bulk), 2.2 (Non-Flammable Non-Toxic Gases), 4.1 (Flammable Solids), 4.3 (Dangerous When Wet Substances), 6 (Toxic Substances, except where Flammable Liquid is nitromethane), 8 (Corrosive Substances), 9 (Miscellaneous Dangerous Goods), Foodstuffs or foodstuff empties.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

| | |
|---------------------|---|
| ADG Code | Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition) |
| AICS | Australian Inventory of Chemical Substances |
| SWA | Safe Work Australia, formerly ASCC and NOHSC |
| CAS number | Chemical Abstracts Service Registry Number |
| Hazchem Code | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| IARC | International Agency for Research on Cancer |
| NOS | Not otherwise specified |
| NTP | National Toxicology Program (USA) |
| R-Phrase | Risk Phrase |
| SUSDP | Standard for the Uniform Scheduling of Drugs & Poisons |
| UN Number | United Nations Number |

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This MSDS is prepared in accord with the SWA document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

Copyright © Kilford & Kilford Pty Ltd, July, 2009.

<http://www.kilford.com.au/> Phone (02)9251 4532

MATERIAL SAFETY DATA SHEET

Issued by: Freedom Fuels Australia Pty Ltd. Phone: 07 3268 5077.

Emergency contacts: Transport & Terminalling: 0400 334 634; Retail: 0448 132 812; Workplace Health & Safety: 0407 599 508

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



performance with responsibility