

UNLEADED PETROL 91

1. IDENTIFICATION

GHS Product Identifier

UNLEADED PETROL 91

Company Name

LIBERTY OIL AUSTRALIA PTY LTD (ABN 34 114 544 437)

Address

381 Tooronga Road
Hawthorn East
Victoria 3123 Australia

Telephone/Fax Number

Tel: +61 (0)3 8530 3500
Fax: +61 0(3) 9822 1562

Emergency phone number

Poisons Information Centre: 13 11 26 (Australia)

Recommended use of the chemical and restrictions on use

Fuel for spark ignition engines designed to run on unleaded fuel. This product is intended for use in closed systems only.

Other Names

Name	Product Code
SHELL LOW AROMATIC UNLEADED PETROL	
SHELL UNLEADED PETROL 91	

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Classified as Dangerous Goods according to Australian Code for Transport of Dangerous Goods by Road and Rail. (7th edition)

Aspiration Hazard: Category 1

Carcinogenicity: Category 1

Flammable Liquids: Category 1

Germ Cell Mutagenicity: Category 1

Hazardous to the Aquatic Environment – Long-Term Hazard: Category 2

Skin Corrosion/Irritation: Category 2

Toxic to Reproduction: Category 2

Signal Word(s)

DANGER

Hazard Statement(s)

H224 Extremely flammable liquid and vapour.

H304 may be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H411 Toxic to aquatic life with long lasting effects.

Pictogram(s)

Flame, Exclamation mark, Health hazard, Environment

**Precautionary Statement – Prevention**

P201 Obtain special instructions before use.

P202 Do not handle all safety precautions have been read and understood.

P210 Keep away from heat/open flames/hot surfaces. – No smoking.

P233 Keep container tightly closed.

P240 Ground /bond container and receiver equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash contaminated skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

Precautionary statement – Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P331 Do NOT induce vomiting.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P370+P378 In case of fire: Use foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only for extinction.

P391 Collect spillage.

Precautionary statement – Storage

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

13. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Gasoline, low boiling point naphtha	86290- 81- 5	90 – 100%
BENZENE	71- 43- 2	<=1%

Preparation Description

Complex mixture of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons (including benzene at 1.0% v/v maximum), with carbon numbers predominantly in the C4 to C12 range. May also contain several additives at <0.1% v/v each.

Other Information

Contains Benzene, CAS # 71-43-2. Contains Toluene, CAS # 108-88-3. Contains Ethylbenzene, CAS# 100-41-4. Contains n-Hexane, CAS # 110-54-3. Contains Xylene (Mixed Isomers), CAS# 1330-20-7. Contains Naphthalene, CAS # 91-20-3. Contains Cyclo-hexane, CAS# 110-82-7. Contains Tri-methyl-benzene (all isomers), CAS# 25551-13-7. Dyes and markers can be used to indicate tax status and prevent fraud.

4. FIRST-AID MEASURES

Inhalation

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist 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 immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre or doctor at once. (131 126)

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media

Do not use water in a jet.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific Hazards Arising From The Chemical

Extremely flammable liquid and vapour. Keep containers and fire-exposed surfaces cool with water-spray. Shut off any leak if safe to do so and remove sources of re-ignition. 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

Decomposition Temperature

Not available

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. This product should be prevented from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Wear appropriate personal protection 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 personal protective equipment and clothing to prevent 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 tightly closed. 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. Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

Conditions for sale storage, including any incompatibilities

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, 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. Ensure that storage conditions comply with applicable local and national regulations.

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.

Unsuitable Materials

Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene.; However, some may be suitable for glove materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:

Benzene

TWA: 1ppm

TWA: 3.2 mg/m³

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.

Biological Limit Values

Name: Benzene

Determinant: S-Phenylmercapturic acid in urine

t,t-Muconic acid in urine

Value: 25µg/g creatinine

500µg/g creatinine

Sampling time: End of shift

Notation: B

Source: American Conference of Industrial Hygienists (ACGIH)

Appropriate Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

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 vapour/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any changes for individual circumstances.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material nitrile gloves may be suitable. (Breakthrough time of >240 minutes). For incidental contact/splash protection Neoprene, PVC gloves may be suitable. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk

assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Liquid

Appearance

Red, Yellow or colourless liquid

Colour

Red, Yellow or colourless

Odour

Hydrocarbon

Decomposition Temperature

Not available

Melting Point

Not available

Freezing Point

Not available

Boiling Point

35 – 210 °C

Solubility in Water

Not available

Specific Gravity

0.71 – 0.77 gm/cm³ at 15 °C

pH

Not available

Vapour Pressure

55 - 80 kPa at 37.8 °C

Vapour Density (Air=1)

Not available

Evaporation Rate

Not available

Odour Threshold

Not available

Viscosity

Not available

Partition Coefficient: n-octanol/water

2- 6

Density

Typical 0.73 g/cm³ at 15 °C

Flash Point

< -40 °C

Flammability

Flammable

Auto-ignition Temperature

Not available

Flammable Limits - Lower

1% (V)

Flammable Limits - Upper

8% (V)

Kinematic Viscosity

0.5 - 0.75 mm²/s at 40 °C

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions of storage and handling.

Reactivity and Stability

Reacts with incompatible materials.

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Incompatible materials

Strong oxidising agents.

Hazardous Decomposition Products

Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

Possibility of hazardous reactions

Not available

Hazardous Polymerization

Not available

11. TOXICOLOGICAL INFORMATION

Toxicology Information

The available toxicity data for material given below.

Acute Toxicity - Oral

LD50: (Rat): >2000 mg/kg

Acute Toxicity - Inhalation

LC50: (Rat): >5 mg/l / 4.00 h

Acute Toxicity - Dermal

LD50: (Rat): >2000 mg/kg

Ingestion

May be fatal if swallowed and enters airways. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause severe pulmonary injury that may lead to death. May cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation

Inhalation of product vapours may cause irritation of the nose throat and respiratory system.

Skin

Causes skin irritation. 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.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

May cause genetic defects. Classified as Known or presumed to induce heritable mutations.

Carcinogenicity

May cause cancer. Classified as Known or presumed human carcinogen.

Benzene is listed as a Group 1: Carcinogenic to humans according to International Agency for Research on Cancer (IARC).

Reproductive Toxicity

Suspected of damaging fertility or the unborn child. Classified as a suspected human reproductive or developmental toxicant.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

May be fatal if swallowed and enters airways.

Other Information

Repeated Dose Toxicity:

Kidney: caused kidney defects in male rats which are not considered relevant to humans

Blood-forming organs: repeated exposure affects the bone marrow. (Benzene)

Peripheral nervous system: repeated exposure causes peripheral neuropathy in animals. (n-Hexane)

Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.

Prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss. (Toluene)

Abuse of vapours has been associated with organ damage and death. (Toluene)

Myelodysplastic syndrome (MDS) was observed in individuals exposed to very high levels (50 ppm to 300 ppm range) of benzene over a long period of time in the workplace. The relevance of these results to lower levels of exposure is not known. (Benzene)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Persistence and degradability

Major constituents are expected to be inherently biodegradable. The volatile constituents will oxidize rapidly by photochemical reactions in air.

Mobility

Floats on water. Evaporates within a day from water or soil surfaces. Large volumes may penetrate soil and could contaminate groundwater. Contains volatile constituents.

Bioaccumulative Potential

Contains constituents with the potential to bioaccumulate.

Other Adverse Effects

Films formed on water may affect oxygen transfer and damage organisms.

Environmental Protection

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

Acute Toxicity - Other Organisms

LL/EL/IL50: (Aquatic organisms): 1-10 mg/l

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. Advise flammable nature. Empty containers may contain flammable residues. Do not cut, puncture or weld on or near containers. 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. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected.

14. TRANSPORT INFORMATION

Transport information

Road and Rail Transport (ADG Code):

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 500L.)
- 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 materials unless specifically exempted

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Class/Division: 3

UN No: 1203

Proper Shipping Name: GASOLINE (MARINE POLLUTANT)

Packing Group: II

EMS: F-E, S-E

Special Provisions: 243, 363

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 3

UN No: 1203

Proper Shipping Name: Gasoline

Packing group: II

Packaging Instructions (passenger & cargo): 353

Packaging instructions (cargo only): 364

Hazard Label: Flammable Liquid

Special Provisions: A100

U.N. Number

1203

UN proper shipping name

GASOLINE

Transport hazard class(es)

3

Packing Group

II

Hazchem Code

3YE

IERG Number

14

IMDG Marine pollutant

Yes

Transport in Bulk

Not available

Special Precautions for User

Not available

Other Information

This product is classified as oils under MARPOL Annex I. MARPOL Annex I rules apply for bulk shipments by sea.

15. REGULATORY INFORMATION

Regulatory information

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, Australia.

SUSMP Schedule: S5. When packed in containers having capacity of less than 20 litres.

SUSMP Schedule: Not scheduled. When packed in containers having capacity of greater than 20 litres.

Poisons Schedule

S5

O16. THER INFORMATION

Date of preparation or last revision of SDS

SDS Reviewed: February 2019

Supersedes: February 2014

References

- Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
 - Standard for the Uniform Scheduling of Medicines and Poisons.
 - Australian Code for the Transport of Dangerous Goods by Road & Rail.
 - Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
 - Workplace exposure standards for airborne contaminants, Safe work Australia.
 - American Conference of Industrial Hygienists (ACGIH).
 - Globally Harmonised System for classification and labelling of chemicals.
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END OF SDS