

Hazardous Substance, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Automotive Liquified Petroleum Gas**

Synonyms:	Mancode
Automotive LPG	-
Autogas	-
LPG	-

Recommended use: Automotive fuel

Supplier: Caltex Australia Petroleum Pty Ltd
ABN: 17 000 032 128
Street Address: 2 Market Street
Sydney NSW 2000
Australia
Telephone: +612 9250-5000
Facsimile: +612 9250-5742

Emergency telephone number: 1800 033 111

2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia.



Signal Word
Danger

Hazard Classification
Flammable Gases – Category 1
Gases Under Pressure – Liquefied Gas

Hazard Statement(s)
H220 Extremely flammable gas
H280 Contains gas under pressure; may explode if heated

Prevention Precautionary Statement(s)
P102 Keep out of reach of children
P103 Read label before use
P210 Keep away from all sources of ignition - No smoking

Response Precautionary Statement(s)
P101 If medical advice is needed, have product container or label at hand
P377 Leaking gas fire – do not extinguish unless leak can be stopped safely
P381 Eliminate all ignition sources if safe to do so

Storage Precautionary Statement(s)
P403 Store in a well ventilated place
P410 Protect from sunlight

Disposal Precautionary Statement(s)

Not allocated

Poisons Schedule (Aust): Not applicable**DANGEROUS GOODS CLASSIFICATION**

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Class: 2.1 Flammable Gas**3. COMPOSITION INFORMATION**

CHEMICAL ENTITY	CAS NO.	PROPORTION
Propane	74-98-6 / 68477-94-1	0-100%
Propene	115-07-1	0-40%
Butane	106-97-8 / 68478-32-0	0-40%
Ethanethiol	75-08-1	<0.005%
Ingredients determined to be non-hazardous	-	Balance
		<hr/> 100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin contact: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye contact: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

PPE for First Aiders: Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Hazchem Code: 2YE

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Flammable gas.

Fire fighting further advice: Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

SPILLS

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Increase ventilation to dilute and disperse escaped gas. If safe to do so, isolate the leak.

Dangerous Goods – Initial Emergency Response Guide No: 4

7. HANDLING AND STORAGE

Handling: Avoid skin and eye contact and inhalation of vapour.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10. Store away from sources of heat or ignition. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Dangerous Good Class 2.1 Flammable Gas as per the criteria of the Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

However for:

	TWA		STEL		CARCINOGEN CATEGORY	NOTICES
	ppm	mg/m3	ppm	mg/m3		
Butane	800	1,900	-	-	-	-
Ethyl mercaptan	0.5	1.3	-	-	-	-

As published by the Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

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.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas, with local exhaust ventilation or while wearing appropriate respirator. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.

Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If risk of inhalation exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid skin and eye contact and inhalation of vapour. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Clear colourless liquid (under pressure), colourless gas, with pungent odour

Solubility:	N App
Specific Gravity (15 °C):	0.53
Relative Vapour Density (air=1):	1.56
Vapour Pressure (40 °C):	1,530 kPa
Flash Point (°C):	-100 (closed-cup)
Flammability Limits (%):	LEL – 2.3; UEL – 9.5
Autoignition Temperature (°C):	450
Melting Point/Range (°C):	N App
Boiling Point/Range (°C):	-50 to -20
pH:	1
Viscosity:	N App
Total VOC (g/Litre):	N Av

(Typical values only - consult specification sheet)

N Av = Not available

N App = Not applicable

10. STABILITY AND REACTIVITY

Reactivity: No reactivity hazards are known for the material.

Chemical stability: This material is thermally stable when stored and used as directed.

Hazardous reactions: No known hazardous reactions.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Material may be an irritant to mucous membranes and respiratory tract.

Skin contact: Contact with skin may result in irritation.

Ingestion: Material is a gas at ambient temperatures, not likely source of ingestion exposure.

Eye contact: May be an eye irritant.

Acute toxicity

Inhalation: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >20 mg/L

Skin contact: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Ingestion: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Corrosion/Irritancy: Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as not corrosive or irritating to skin.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a respiratory sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

UN No:	1075
Dangerous Goods Class:	2.1
Packing Group:	None
Hazchem Code:	2A
Emergency Response Guide No:	4

Proper Shipping Name: PETROLEUM GASES, LIQUEFIED

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable liquids (Class 3), if both are in bulk, flammable solids (Class 4.1), spontaneously combustible substances (Class 4.2), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2) or radioactive substances (Class 7), however exemptions may apply.

MARINE TRANSPORT

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

UN No: 1075
Dangerous Goods Class: 2.1
Packing Group: None

Proper Shipping Name: PETROLEUM GASES, LIQUEFIED

AIR TRANSPORT

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

UN No: 1075
Dangerous Goods Class: 2.1
Packing Group: None

Proper Shipping Name: PETROLEUM GASES, LIQUEFIED

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This material/constituent(s) is covered by the following requirements:

- All the constituents of this material are listed on the *Australian Inventory of Chemical Substances (AICS)*.

16. OTHER INFORMATION

Literary reference

Reason(s) For Issue: First Issue

Material Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

CHEMICAL EMERGENCIES: 1 800 033 111
TECHNICAL ADVICE, RING LUBELINK: 1300 364 169

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

Safety Data Sheet



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