SAFETY DATA SHEET

PLUMBOSS MAXXGASS

Infosafe No.: LQ2D8
ISSUED Date : 17/03/2020
ISSUED by: plumBOSS AUSTRALIA PTY LTD.

1. IDENTIFICATION

GHS Product Identifier
PLUMBOSS MAXXGASS

Company Name
plumBOSS AUSTRALIA PTY LTD. (ABN 84 568 553 950)

Address
53 Taylor Street (Postal Address: PO Box 793)
Bulimba
QLD AUSTRALIA

Telephone/Fax Number
Tel: (07) 3373 3500
Fax: (07) 3373 3533

Emergency phone number
(07) 3373 3500

E-mail Address
info@plumboss.com.au

Recommended use of the chemical and restrictions on use
Gas source when used for welding or cutting.

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 the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Flammable Gases: Category 1
Gases under Pressure: Liquefied Gas

Signal Word (s)
DANGER

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

Pictogram (s)
Flame,Gas cylinder

Precautionary statement – Prevention
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Precautionary statement – Response

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.

Precautionary statement – Storage
P403 Store in a well-ventilated place.
P410+P403 Protect from sunlight. Store in a well-ventilated place.

Precautionary statement – Disposal
Not Applicable

Other Information
Physico-chemical:
Vapours from liquefied gas are usually heavier than air.
Vapours may travel to source of ignition and flash back.
Containers may explode when heated - Ruptured cylinders may rocket.
May decompose explosively (D) or polymerize violently (P) when heated or involved in a fire.

Human health:
High concentration of gas may cause asphyxiation without warning.
Some are irritating or poisonous in high concentrations.
Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
propylene	115-07-1	50-<90 %
Propane	74-98-6	20-<30 %
Nitrogen	7727-37-9	0-<1 %
Ethane	74-84-0	0-<1 %
acetylene	74-86-2	0-<1 %
Ingredients determined not to be hazardous.		Balance

4. FIRST-AID MEASURES

Inhalation
Avoid becoming a casualty - to protect rescuer, use air-viva, oxy-viva or one-way mask. Remove affected person from contaminated area - Apply artificial respiration if not breathing. Do not give direct mouth to mouth resuscitation. Resuscitate in a well ventilated area. Seek IMMEDIATE medical attention. Note: in confined space - DO NOT ATTEMPT RESCUE WITHOUT ADEQUATE RESPIRATORY PROTECTION.

Ingestion
Not considered a potential route of exposure.

Skin
Remove all contaminated clothing immediately. Clothing frozen to the skin should be thawed before being removed. Wash affected area thoroughly with soap and water. For Frostbite: Flush affected areas with lukewarm water. Do not use hot water. Treat as thermal burns. Seek IMMEDIATE medical attention.

Eye contact
If eye tissue is frozen, seek IMMEDIATE medical attention. If tissue is not frozen, immediately irrigate with copious amounts of water for at least 15 minutes. Remove contact lenses. Eyelids to be held open. Seek medical attention.

First Aid Facilities
Eye wash and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

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

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Do not extinguish burning gas unless leak can be stopped. cut off source of gas if safe to do so - if not possible, leave gas to burn, protect exposures, cool containers.

If safe to do so, move undamaged containers from fire area.
Extinguish secondary fire.

Small fire:
Use dry chemical, CO2 or water spray to extinguish burning gas if absolutely necessary and safe to do so.
Do not use water jets.

Large fire:
Cool container by directing flooding quantities of water onto upper surface until well after fire is out -
Do not direct water at source of leak or venting safety devices as icing may occur.
Cool container and fight secondary fire from protected position or use unmanned hose holders or monitor nozzles - When impossible, withdraw immediately from hazard area and let burn.
Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank-tank may explode.

Unsuitable Extinguishing Media
Do not use water 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 gas. Explosive gas-air vapour mixtures may form. Flashback along the vapour trail may occur. Keep away from heat, naked flames, and sparks. Cylinders may explode when heated or may become a projectile in a fire.

Vapours from liquefied gas are usually heavier than air. May decompose explosively (D) or polymerize violently (P) when heated or involved in a fire.

Hazchem Code
2YE

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.

ALWAYS stay away from tank ends.
Damaged containers should only be handled following expert advice.
Always wear thermal protective clothing when handling cryogenic liquids and associated equipment.
Fully encapsulating gas-tight suit does not provide significant protection against radiant and convective heat.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Remove all sources of ignition within at least 200 m. - All equipment used when handling the product must be earthed. Increase ventilation. Evacuate all unprotected personnel. Do not touch or walk through spilled material. Use self-contained breathing apparatus (S.C.B.A) and full protective clothing to minimise exposure. Allow gas to vent safely to atmosphere, preferably in well ventilated, remote location. Monitor oxygen concentration in confined spaces. Check for leaks using pressure drop test or soapy water on joints and outlets. Shut cylinder valve to stop leak if possible and safe to do so. Check gas concentration to ensure area is safe before removing protective equipment. Damaged gas cylinders should be returned to the supplier.

Use water spray, fog or vapour-suppressing foam to knock down vapours or divert vapour clouds. Do not direct water at source of leak or venting safety devices as icing may occur. Caution: When in contact with cryogenic liquids, most materials become brittle and are likely to break without warning.

Evacuation:
Large spill:
Consider initial evacuation for at least 800 m in all directions.
Fire:
When any large container (including rail and road tankers) is involved in a fire, consider initial evacuation for 1500 m in all directions.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Use in a well ventilated area. Use away from all sources or heat and ignition. Avoid skin and eye contact and breathing of gas. Post "NO SMOKING" signs in area of use. Avoid release of gas into workplace air. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Wear appropriate personal protective equipment and clothing to prevent exposure. Use smallest possible amounts in designated areas with adequate ventilation. Maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities. DO NOT enter confined spaces where gas may have collected. Suck back of water into the container must be prevented. Do not allow back feed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's container handling instructions.

Conditions for safe storage, including any incompatibilities
Cylinders shall be stored in a cool, dry, well-ventilated area out of direct sunlight and away from heat and ignition sources. Outside or detached storage is preferred. No part of cylinders shall be exposed to temperatures above 50ºC. Cylinders shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cylinders shall be stored separately from empties. Keep cylinder valve cover on. Label empty cylinders and store full cylinders separately from empty ones. Consider leak detection and alarm systems, as required. Limit quantity in storage. Restrict access to storage area and post warning signs. Inspect periodically for deficiencies such as damage or leaks. Have fire extinguishers available in and near the storage area. 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 AS 4332 - The storage and handling of gases in cylinders.

Storage Temperatures
Store in a cool, ventilated dedicated warehouse, warehouse temperature should not exceed 50 ° C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
No exposure standards have been established for the mixture. However, over-exposure to some chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.

Biological Limit Values
No biological limits allocated.

Appropriate Engineering Controls
Use with good general ventilation. If mists or vapours are produced, local exhaust ventilation should be used.

Before entering a confined space where Propylene, Propane, Ethane, Acetylene and Nitrogen are present, check to make sure sufficient Oxygen (19.5%) exists. Refer to relevant regulations for further information concerning ventilation requirements.
Refer to AS 2865 Australian Standard Safe working in a confined space, 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 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 necessary 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 should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

Hand Protection
Wear gloves of impervious material. 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.

Other Information
Propylene, Propane, Ethane, Acetylene and Nitrogen are asphyxiant gases which when present in an atmosphere in high concentration, lead to reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for an asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Gas	**Appearance**	Colorless liquefied gas,
Odour	Slight ether odor	**Decomposition Temperature**	Not available
Melting Point	-185°C	**Boiling Point**	-41.5°C
Solubility in Water	Slightly soluble in water	**Specific Gravity**	Not available
pH	6-7	**Vapour Pressure**	868.3 kPa at 21°C
Vapour Density (Air=1)	1.58 (298.16k, 1atm)	**Evaporation Rate**	Not available
Odour Threshold	Not available	**Viscosity**	Not available
Partition Coefficient: n-octanol/water	Not available	**Flash Point**	-108°C
Flammability	Extremely flammable	**Auto-Ignition Temperature**	Not available
Flammable Limits - Lower	2.1 v/v	**Flammable Limits - Upper**	12.0 v/v
Relative density	0.563		

Other Information
Stagnation Temperature (°C): 100.6
Ignition temperature (°C): 450
Combustion Heat (kJ/mol): 1980
Stagnation Pressure (Mpa): 4.62

10. STABILITY AND REACTIVITY

Reactivity
Reacts with incompatibles.

Chemical Stability
Stable under normal conditions of storage and handling.

Conditions to Avoid
Heat, direct sunlight, open flames or other sources of ignition.

Incompatible materials
Natural rubber, More than 65% of the copper, silver, mercury, and acidic substances, metal sulfide, potassium, potassium permanganate.

Hazardous Decomposition Products
Thermal decomposition and combustion produce noxious fumes containing oxides of carbon.

Possibility of hazardous reactions
Reacts with incompatibles.

Hazardous Polymerization
May decompose explosively (D) or polymerize violently (P) when heated or involved in a fire.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
No toxicity data available for this material.

Ingestion
Not a likely source of exposure, however, liquid may cause freeze burns to mouth and throat.

Inhalation
Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.
Propylene, Propane, Ethane, Acetylene and Nitrogen are asphyxiant gases which when present in an atmosphere in high concentration, leads to reduction of oxygen concentration by displacement or dilution. Symptoms include decreased visual acuity, decreased coordination and judgment, headache, dizziness, confusion, drowsiness, fatigue, shortness of breath, muscular weakness, convulsions, unconsciousness, coma and eventually death

Skin
May cause frostbite injuries to skin due to uncontrolled release of compressed gas resulting in redness, tissue destruction.

Eye
May cause frostbite injuries to eyes due to uncontrolled release of compressed gas resulting in stinging, tearing, blurred vision and possibly permanent damage to eyes.

Respiratory sensitisation
Not expected to be a respiratory sensitiser.

Skin Sensitisation
Not expected to be a skin sensitiser.

Germ cell mutagenicity
Not considered to be a mutagenic hazard.

Carcinogenicity
Not considered to be a carcinogenic hazard.

Propylene is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

Reproductive Toxicity
Not considered to be toxic to reproduction.

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
Not expected to be an aspiration hazard.

Other Information
This material is a mixure of asphyxiant gases, which when present in an atmosphere in high concentrations, lead to a reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained. The minimum oxygen content in air should be 19.5 per cent by volume under normal atmospheric pressure. Unconsciousness and death can rapidly ensue in an environment, which is deficient in oxygen.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No ecological data available for this material.

Persistence and degradability
Not available

Mobility
Not available

Bioaccumulative Potential
Not available

Other Adverse Effects
Not available

Environmental 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. 'Empty' containers retain residue (liquid and/or vapour) and can be dangerous. Do not attempt to clean since residue is difficult to remove. Do not pressurise, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks and other sources of ignition. They may explode and cause injury or death. All containers should be returned to the supplier. Privately owned containers no longer required, should be disposed of in an environmentally safe manner, and in accordance with applicable regulations.

14. TRANSPORT INFORMATION

Transport Information
This material is classified as Dangerous Goods Division 2.1 Flammable Gases
Division 2.1 Dangerous Goods are incompatible in a placard load with any of the following:
- Class 1: Explosives
- Division 2.2 Non-flammable, Non toxic gas that have a subsidiary risk 5.1 except when all are packed in cylinders or pressure drums not exceeding 500L capacity.
- Class 3: Flammable Liquids, if both the Division 2.1 and Class 3 dangerous goods are in tanks or other receptacles with a capacity individually exceeding 500L.
- Division 4.1: Flammable Solids
- Division 4.2: Spontaneously combustible substances
- Division 4.3: Dangerous when wet substances
- Division 5.1: Oxidising substances
- Division 5.2: Organic peroxides
- 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.
Proper Shipping Name: LIQUEFIED GAS, FLAMMABLE, N.O.S. (Contains Propylene, Propane, Ethane & Acetylene)
UN-No: 3161
Division: 2.1
EmS: F-D,S-U
Special Provisions: 274

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.
Proper Shipping Name: LIQUEFIED GAS, FLAMMABLE, N.O.S. (Contains Propylene, Propane, Ethane & Acetylene)
UN-No: 3161

Division: 2.1
Hazard Labels: Flammable gas
Packaging Instructions (cargo only): 200
Packaging Instructions (passenger & cargo): Forbidden
Special Provisions: A1, A807

U.N. Number
3161

UN proper shipping name
LIQUEFIED GAS, FLAMMABLE, N.O.S.(Contains Propylene, Propane, Ethane & Acetylene)

Transport hazard class(es)
2.1

Hazchem Code
2YE

IERG Number
04

IMDG Marine pollutant
No

Transport in Bulk
Not available

Special Precautions for User
Not available

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.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule
Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of SDS
SDS Reviewed: March 2020
SDS Supercedes: March 2015

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.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of Classification and Labelling of Chemicals.
Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

END OF SDS