

SAFETY DATA SHEET

**AURORA
LITES**

REDHEADS BUTANE GAS 220G

Infosafe No.: LQBUX
ISSUED Date : 04/09/2023
ISSUED by: AURORA LITES PTY LTD

Section 1 - Identification

Product Identifier

REDHEADS BUTANE GAS 220G

Company Name

AURORA LITES PTY LTD (ABN 66 649 845 787)

Address

20 Gwynne Street Cremorne
VIC 3121 Australia

Telephone/Fax Number

Tel: +61 1800 577 280

Emergency Phone Number

Poisons Information Centre (131 126) (24 hours)

E-mail Address

hello@auroralites.com.au

Recommended use of the chemical and restrictions on use

For use only in portable gas appliances.

Section 2 - Hazard(s) 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 1A

Gases under pressure: Category 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautionary Statement – Response

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 In case of leakage, eliminate all ignition sources.

Precautionary Statement – Storage

P403 Store in a well-ventilated place.
P410+P403 Protect from sunlight. Store in a well-ventilated place.

Precautionary Statement – General

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
butane	106-97-8	50-70 %
isobutane	75-28-5	20-50 %
propane	74-98-6	<10 %
Ingredients determined not to be hazardous		Balance

Section 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

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

Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

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

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Powder fire extinguisher, carbon dioxide (use water or fog in case of a blaze).

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.

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. Cartridges may explode when heated or may become a projectile in a fire. Heavier than the air. Low electrical conduction may cause static electricity and ignition by a spark.

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.

Section 6 - Accidental Release Measures

Emergency Procedures

Remove all sources of ignition. Increase ventilation. Evacuate all unprotected personnel. 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 cartridge 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 cartridges should be returned to the supplier.

Section 7 - Handling and Storage

Precautions for Safe Handling

Use in a well ventilated area. Use away from all sources of 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

Cartridges 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 cartridges shall be exposed to temperatures above 50°C. Cartridges shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cartridges shall be stored separately from empties. Keep cartridges valve cover on. Label empty cartridges and store full cartridges 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

Do not expose to temperatures exceeding 50°C.

Section 8 - Exposure Controls and 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:

Butane

TWA: 800 ppm, 1900 mg/m³

Propane

Note: Asphyxiant

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.

Source: Safe Work Australia.

Biological Monitoring

No biological limits allocated.

Control Banding

Not available

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.

Before entering a confined space where Butane and Propane 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 and Face 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 (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.

Thermal Hazards

No further relevant information available.

Body Protection

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

Other Information

Butane and Propane 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 each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Gas	Appearance	Cartridges containing liquified gas. (liquid and vapour)
Odour	Odourless	Melting/Freezing Point	Isobutane: -160°C; Propane: -187.7°C; Butane: -138.3°C
Boiling Point	Isobutane: -11.5°C; Propane: -42.1°C; Butane: -0.5°C	Decomposition Temperature	Not available
Solubility	Isobutane: not available; Propane: 0.007 g/100 mL (20 °C); Butane: 3.25 mL/100 mL (20 °C)	Specific Gravity	Isobutane: 0.549 @ 20°C; Propane: 0.501 @ 20°C; Butane: 0.549 @ 20°C
pH	Not applicable	Vapour Pressure	Isobutane: 0.304MPa (@20°C); Propane: 0.75MPa (@20°C); Butane: 0.214MPa(@21.1°C)
Relative Vapour Density (Air=1)	Isobutane: 2.595; Propane: 1.55; Butane: 2.1	Evaporation Rate	100%
Odour Threshold	Not available	Viscosity	Not available
Partition Coefficient: n-octanol/water (log value)	Isobutane: 2.8 as log POW; Propane: 2.36 as log POW; Butane: 2.89 as log POW	Flash Point	Isobutane: -88.0°C ; Propane: -104.4°C; Butane: -73.3°C
Flammability	Extremely flammable	Auto-Ignition Temperature	Isobutane: 460°C; Propane: 466.1°C; Butane: 287°C
Flammable Limits - Lower	Isobutane: 1.8 vol% ; Propane: 2.2 vol%; Butane: 1.9 vol%	Flammable Limits - Upper	Isobutane: 8.4 vol% ; Propane: 9.5 vol%; Butane: 8.4 vol%
Explosion Properties	Not available	Oxidising Properties	Not available
Particle Characteristics	Not applicable		

Section 10 - Stability and Reactivity

Reactivity

Reacts with incompatible materials.

Chemical Stability

Stable under normal conditions of storage and handling.

Possibility of hazardous reactions

May explode on contact with Carbonyl nickel & acid at 20~40°C.

Conditions to Avoid

Heat, direct sunlight, flames and other sources of ignition. Pressurised container: may burst if heated . Do not expose to temperatures exceeding 50°C.

Incompatible Materials

Strong oxidizers, nitric acid, chlorine dioxide, carbonyl nickel & acids.

Hazardous Decomposition Products

Does not decompose when used and stored as recommended. Thermal decomposition may result in the release of toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.

Hazardous Polymerization

Not available

Section 11 - Toxicological Information

Toxicology Information

No toxicity data available for this material.

Ingestion

Ingestion unlikely due to form of product.

Inhalation

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

Propane and butane 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.

Serious Eye Damage/Irritation

Product: Not irritating (Rabbit)

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.

The product contains components that are probably not carcinogenic based on IARC, ACGIH, NTP, or EPA classifications.

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.

Section 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.

Hazardous to the Ozone Layer

This product is not expected to deplete the ozone layer.

Section 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. To minimise personal exposure to the chemical, refer to Section 8—Exposure controls and personal protection.

Section 14 - Transport Information

Transport Information

Road and Rail Transport (ADG Code):

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.

Class/Division: 2.1

UN No: 2037

Proper Shipping Name: RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

Packing Group: -

EMS: F-D, S-U

Special Provisions: 191, 277, 303, 327, 344, 959

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: 2.1

UN No: 2037

Proper Shipping Name: Receptacles, small, containing gas

Packing Group: -

Packaging Instructions (passenger & cargo): 203

Packaging Instructions (cargo only): 203

Hazard Label: Flammable Gas

Special Provisions: A145, A167, A802

ADG U.N. Number

2037

ADG Proper Shipping Name

RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

ADG Transport Hazard Class

2.1

IERG Number

04

Special Precautions for User

Not available

IMDG Marine pollutant

No

Transport in Bulk

Not available

Section 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

Montreal Protocol

Not listed

Stockholm Convention

Not listed

Rotterdam Convention

Not listed

International Convention for the Prevention of Pollution from Ships (MARPOL)

Not available

Agricultural and Veterinary Chemicals Act 1994

Not available

Basel Convention

Not listed

Section 16 - Any Other Relevant Information

Date of Preparation

SDS Created: September 2023

Version Number

1.0

Literature 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.

Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Code of Practice for Supply Diversion into Illicit Drug Manufacture.

National Code of Practice for Chemicals of Security Concern.

Agricultural Compounds and Veterinary Chemicals Act.

International Agency for Research on Cancer (IARC) Monographs.

Montreal Protocol on Substances that Deplete the Ozone Layer.

Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International

Trade.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

International Air Transport Association (IATA) Dangerous Goods Regulations.

International Maritime Dangerous Goods (IMDG) Code.

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 (7th revised edition).

Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

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