SAFETY DATA SHEET

According to Safe Work Australia

Printing date 25.10.2013 Revision: 25.10.2013

1 . IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: PRIMUS LIGHTER

Product Code: 2312

Recommended Use of the Chemical and Restriction on Use: Fuel, commercial and industrial applications.

Details of Manufacturer or Importer:
Primus Australia Pty Ltd
3/20 Enterprise Drive
Bundoora VIC 3083

Phone Number: 03 9468 4400

Emergency telephone number: 13 11 26

2 . HAZARDS IDENTIFICATION

Hazardous Nature:

GHS02 flame

Flam. Gas 1 H220 Extremely flammable gas.

Label Elements

Signal Word Danger

Hazard Statements
H220 Extremely flammable gas.

Precautionary Statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.
P403 Store in a well-ventilated place.

3 . COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:			
106-97-8	Butane	Flam. Gas 1, H220; Press. Gas, H280	37.8%
75-28-5	Propane, 2-methyl-	Flam. Gas 1, H220; Press. Gas, H280	36.0%
74-98-6	Propane	Flam. Gas 1, H220; Press. Gas, H280	26.2%

4 . FIRST AID MEASURES

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

Skin Contact:
In case of skin contact, immediately remove contaminated clothing. Frozen tissue should be flushed with plenty of warm water. Do not use hot water. Cryogenic (low temperature) burns which result in blistering or deeper tissue freezing should be promptly treated by a physician.

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Eye Contact:
In case of eye contact, rinse cautiously with water or saline solution for several minutes until no chemical remains. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

Ingestion:
Ingestion is not considered a potential route of exposure. Do not give anything by mouth to an unconscious person. Seek immediate medical attention.

Information for Doctor
Antidote : No specific antidote exists (General or supportive therapy may be done based on the symptoms)

Symptoms Caused by Exposure:
Inhalation: Irritation, nausea, vomiting, difficulty in breathing, headache, drowsiness, symptoms of drunkenness, tingling, suffocation and coma.
Skin: May cause frostbite, blistering and paralysis.
Eye: May cause frostbite or problem with vision.
Ingestion: May cause frostbite.

5 . FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Carbon dioxide, powder, water and fog.

Specific Hazards Arising from the Chemical:
Flammable gas. Vapours are heavier than air and may travel along the ground and collect in low or confined areas and be exposed to a source of ignition (pilot light, heater, electric motor) some distance away and backfire. Containers may burst or explode if exposed to heat or spark. Low electrical conduction may cause static electricity, and be ignited by a spark.
Shut off gas source and allow the fire to burn itself out. Gas fires should not be extinguished unless the gas flow can be stopped immediately.If gas source cannot be shut off immediately, fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool container with flooding quantities of water until well after fire is out to prevent container from exploding.

Special Protective Equipment and Precautions for Fire Fighters:
Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing.

6 . ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation, ventilate the closed place before entering. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

Environmental Precautions:
In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:
Eliminate all sources of ignition and stop leak if safe to do so. In case of a leak or of an emergency disposal, secure the cylinder and slowly discharge the gas to the atmosphere in a well-ventilated area or outdoors. Vapour can be dispersed with sustained water spray. Use only non-sparking tools.

7 . HANDLING AND STORAGE

Precautions for Safe Handling:
Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours or gas. Use in a well-ventilated area since a use in the airtight place may cause explosion and suffocation. Use with a partial ventilation or general diluted ventilation equipment. Take precautionary measures against static discharge. After use, separate the product in order to avoid an explosion by radiant heat.
Food, beverages and tobacco products should not be stored or consumed where this material is in use.

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Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:
Store in a cool, dry and well ventilated area. Protect from direct sunlight, heat/sparks/open flames/hot surfaces. Do not expose to temperatures exceeding 40 °C. Keep container tightly closed. Ground / bond container and receiving equipment. Take precautionary measures against static discharge. Keep away from strong oxidisers, nitric acid, chlorine dioxide, carbonyl nickel and acid. Keep out of reach of children.

8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:	
106-97-8 Butane	
NES	TWA: 1900 mg/m³, 800 ppm
68476-85-7 Petroleum gases, liquefied	
NES	TWA: 1800 mg/m³, 1000 ppm

Engineering Contols:
Local exhaust and general ventilation are necessary in work area to prevent accumulation of explosive mixtures. Provide special ventilation in sumps and confined spaces. Use explosion-proof ventilating equipment.

Personal Protective Equipment (PPE):

Respiratory Protection:
Use a Safe Work Australia approved full face supplied air respirator if high airborne concentrations of the material are present. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:
Protective gloves and protective clothing. See Australian Standards AS/NZS 2161, 2210.1 and 2210.2 for more information.

Eye and Face Protection:
Safety glasses with top and side shields or goggles. See Australian Standards AS/NZS 1336 and 1337 for more information.

9 . PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Liquid and vapour
Colour:	Colourless
Odour:	Occasionally smells like rotten garlic, otherwise odourless.
Odour Threshold:	No information available
pH-Value:	Not applicable
Melting point/Melting range:	-187.7to -138.3 °C
Initial Boiling Point/Boiling Range:	-42.1 to -0.5 °C
Flash Point:	-104.4 to -73.3 °C
Flammability:	Extremely flammable
Auto-ignition Temperature:	287 to 466.1 °C
Decomposition Temperature:	No information available

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Explosion Limits:	
Lower:	1.9 Vol % (N-Butane) 1.8 Vol % (Iso-Butane) 2.2 Vol % (Propane)
Upper:	8.4 Vol % (N-Butane) 8.4 Vol % (Iso-Butane) 9.5 Vol % (Propane)
Vapour Pressure:	0.214MPa @21.1 °C (N-Butane) 0.304MPa @20 °C (Iso-Butane) 0.75MPa @20 °C (Propane)
Relative Density:	0.549 (water = 1) @20 °C (N-Butane) 0.549 (water = 1) @20 °C (Iso-Butane) 0.501 (water = 1) @20 °C (Propane)
Vapour Density:	2.1 (air = 1) @20 °C (N-Butane) 2.595 (air = 1) @20 °C (Iso-Butane) 1.55 (air = 1) @20 °C (Propane)
Evaporation Rate:	100 %
Solubility in Water:	3.25ml/100ml@20 °C (N-Butane) 0.007g/100ml@20 °C (Propane)
Partition Coefficient (n-octanol/water):	2.89 as log POW (N-Butane) 2.8 as log POW (Iso-Butane) 2.36 as log POW (Propane)
Viscosity:	No information available
VOC:	No information available

10 . STABILITY AND REACTIVITY

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at a normal temperature and pressure.

Conditions to Avoid: Heat, sparks, open flames, hot surfaces, direct sunlight and temperature above 40℃.

Incompatible Materials: Strong oxidisers, nitric acid, chlorine dioxide, carbonyl nickel and acid.

Hazardous Decomposition Products: Oxides of carbon.

11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD_{50}/LC_{50} Values Relevant for Classification:		
106-97-8 Butane		
Inhalation	LC_{50}/4 h	658 mg/l (rat)
74-98-6 Propane		
Inhalation	LC_{50}/4 h	658 mg/l (rat)

Acute Health Effects
Inhalation:
Simple asphyxiant. May affect central nervous system and cause headache, dullness, difficulty in breathing, drowsiness, and losing consciousness. Exposure under 1% concentration for 10 minutes may cause drowsiness or dizziness. High concentration may cause suffocation, difficulty in breathing, nausea, vomiting, coma, spasm, and paralysis. 19,000ppm concentration may cause immediate danger to life or health.
Skin: Contact with liquid may cause frostbite and blistering.
Eye: Contact with liquid may cause frostbite and loss of eyesight.

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Ingestion:
Gas ingestion is not likely to occur. However, may cause frostbite on the lips, mouth, and membrane if liquid is swallowed.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Based on classification principles, the classification criteria are not met.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity: This product does NOT contain any IARC listed chemicals.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:
Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: May cause symptoms the same as acute exposure.

Existing Conditions Aggravated by Exposure: No information available

12 . ECOLOGICAL INFORMATION

Ecotoxicity: No information available

Aquatic toxicity: No information available

Persistence and Degradability: No information available

Bioaccumulative Potential: No information available

Mobility in Soil: No information available

13 . DISPOSAL CONSIDERATIONS

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or Incineration:
Please consult your state Land Waste Management Authority for more information.

14 . TRANSPORT INFORMATION

UN Number **ADG, IMDG, IATA**	UN2037
Proper Shipping Name **ADG, IMDG, IATA**	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)
Dangerous Goods Class **ADG Class:**	2.1
Packing Group: **ADG, IMDG, IATA**	Not applicable
Hazchem Code:	2T
Special Provisions:	191, 277, 303

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Packagings & IBCs - Packing Instruction: P003

Packagings & IBCs - Special Packing Provisions: PP17

Portable Tanks & Bulk Contatiners - Instructions: Not applicable

Portable Tanks & Bulk Containers - Special Provisions: Not applicable

15 . REGULATORY INFORMATION

Australian Inventory of Chemical Substances:	
106-97-8	Butane
75-28-5	Propane, 2-methyl-
74-98-6	Propane

16 . OTHER INFORMATION

Creation Date: 25.10.2013

Prepared by: MSDS.COM.AU Pty Ltd www.msds.com.au

Abbreviations and acronyms:
ADG: Australian Dangerous Goods
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
IARC: International Agency for Research on Cancer
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
NES: National Exposure Standard

Disclaimer
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