Baraka Gas Ltd

Clean & Reliable Cooking Partner

EPRA Licensed
KEBS Certified

MATERIAL SAFETY DATA SHEET (MSDS)

Product: Liquefied Petroleum Gas (LPG)
Revision Date: November 2024
Document No: MSDS-LPG-001

1. PRODUCT IDENTIFICATION

Product Name	Liquefied Petroleum Gas (LPG)
Chemical Name	Propane/Butane Mixture
Chemical Formula	C_3H_8 / C_4H_{10}
CAS Number	68476-85-7 (LPG)
Supplier	Baraka Gas Ltd P.O. Box 26806 - 00100, Nairobi, Kenya
Emergency Phone	+254 721 489 755 (24/7)
Email	info@barakagas.com

2. HAZARD IDENTIFICATION

⚠ **DANGER:** Extremely flammable gas. Contains gas under pressure; may explode if heated.

GHS Classification:

- Flammable gases - Category 1
- Gases under pressure - Compressed gas
- Simple asphyxiant

Signal Word: DANGER

Hazard Statements:

- H220: Extremely flammable gas
- H280: Contains gas under pressure; may explode if heated

Precautionary Statements:

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources
- Do not smoke
- Leaking gas fire: Do not extinguish, unless leak can be stopped safely
- Protect from sunlight when ambient temperature exceeds 50°C

3. COMPOSITION / INGREDIENTS

Component	CAS Number	Concentration (%)
Propane	74-98-6	30-70%
Butane	106-97-8	30-70%
Ethyl Mercaptan (Odorant)	75-08-1	<0.1%

4. FIRST AID MEASURES

Inhalation:

- Move victim to fresh air immediately
- If breathing is difficult, give oxygen
- If not breathing, give artificial respiration
- Seek medical attention immediately

Skin Contact:

- In case of frostbite, place affected area in lukewarm water
- Do NOT rub affected area
- Seek medical attention

Eye Contact:

- Flush eyes with water for at least 15 minutes
- Seek medical attention if irritation persists

Ingestion:

- Not applicable (gas)

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

- Water spray or fog
- Dry chemical
- Carbon dioxide (CO_2)

Special Hazards:

- Extremely flammable
- Vapors may travel to source of ignition and flash back
- Containers may explode when heated

Fire-Fighting Procedures:

- Evacuate area and fight fire from safe distance
- Use water spray to cool containers
- Do not extinguish gas fire unless leak can be stopped
- Wear self-contained breathing apparatus (SCBA)

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

- Evacuate personnel to safe areas
- Eliminate all ignition sources
- Ensure adequate ventilation
- Wear appropriate protective equipment

Environmental Precautions:

- Prevent entry into waterways, sewers, basements
- Notify local authorities if large spill occurs

Containment:

- Stop leak if safe to do so
- Allow gas to disperse naturally in well-ventilated area
- Do not touch or walk through spilled material

7. HANDLING AND STORAGE

Handling:

- Use only in well-ventilated areas
- Keep away from heat, sparks, and flames
- Do not smoke while handling
- Use proper cylinder handling equipment
- Close valve after each use

Storage:

- Store in cool, dry, well-ventilated area
- Keep away from incompatible materials
- Store upright and secure to prevent falling
- Protect from physical damage
- Temperature: Store below 50°C
- Keep cylinders away from direct sunlight

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

- Propane: 1000 ppm (TWA)
- Butane: 800 ppm (TWA)

Engineering Controls:

- Provide adequate ventilation
- Use explosion-proof equipment
- Install gas detection systems

Personal Protective Equipment (PPE):

- **Eye Protection:** Safety glasses
- **Hand Protection:** Insulated gloves for handling cylinders
- **Respiratory Protection:** Not normally required with adequate ventilation
- **Skin Protection:** Long sleeves and pants

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Colorless gas
Odor	Characteristic (added odorant)
Molecular Weight	44-58 g/mol
Boiling Point	-42°C to -0.5°C
Vapor Pressure	High (at 20°C)
Vapor Density	1.5-2.0 (Air = 1)
Specific Gravity	0.5-0.6 (Water = 1)
Flammability Limits	LEL: 2.1% UEL: 9.5%
Auto-ignition Temperature	450-500°C
Solubility in Water	Slight

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions
Conditions to Avoid: Heat, sparks, flames, static electricity
Incompatible Materials: Strong oxidizing agents, halogens
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Low toxicity by inhalation
Chronic Effects: None known
Carcinogenicity: Not classified as carcinogenic
Mutagenicity: No data available
Reproductive Toxicity: No data available
Target Organs: Central nervous system (high concentrations)

12. ECOLOGICAL INFORMATION

Ecotoxicity: Low toxicity to aquatic organisms
Persistence/Degradability: Readily biodegradable
Bioaccumulation: Low potential
Mobility: Highly volatile, will evaporate rapidly

13. DISPOSAL CONSIDERATIONS

Waste Disposal:

- Return empty cylinders to Baraka Gas Ltd for proper disposal
- Do not puncture or incinerate containers
- Dispose in accordance with local regulations
- Contact Baraka Gas for cylinder return program

14. TRANSPORT INFORMATION

UN Number	UN 1075
Proper Shipping Name	PETROLEUM GASES, LIQUEFIED
Hazard Class	2.1 (Flammable Gas)
Packing Group	Not applicable
Marine Pollutant	No
Special Precautions	Transport in upright position, secure to prevent movement

15. REGULATORY INFORMATION

Kenya Regulations:

- Energy and Petroleum Regulatory Authority (EPRA) - Licensed
- Kenya Bureau of Standards (KEBS) - Certified
- Occupational Safety and Health Act (OSHA) - Compliant

International Regulations:

- UN GHS - Globally Harmonized System compliant
- ISO 9001 - Quality Management System

16. OTHER INFORMATION

Prepared By: Baraka Gas Ltd Safety Department
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