



SOLVENT DIRECT

SAFETY DATA SHEET

70% n-Butane / 30% Propane Blend

Section 1: Identification

Product Name: 70% n-Butane / 30% Propane (Liquefied Petroleum Gas Mixture, LPG Blend) Other Names: Hydrocarbon Gas Mixture n.o.s., Custom LPG Blend, 70/30 Butane/Propane

CAS Numbers: Mixture - Butane 106-97-8 (major component), Propane 74-98-6

Recommended Use: Fuel gas, extraction solvent (e.g., botanical), aerosol propellant, chemical feedstock

Restrictions on Use: Not for direct consumer use without proper equipment/ventilation

Supplier: Various

Emergency Phone: CHEMTREC (US) **1-800-424-9300**

Section 2: Hazard(s) Identification

GHS Classification:

- Flammable gases – Category 1
- Gases under pressure – Liquefied gas
- Simple asphyxiant

Signal Word: Danger

Hazard Statements:

- H220: Extremely flammable gas
- H280: Contains gas under pressure; may explode if heated
- May displace oxygen and cause rapid suffocation

Pictograms:

Precautionary Statements:

Prevention: P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response:

P377 – Leaking gas fire: Do not extinguish unless leak can be stopped safely.

P381 – Eliminate all ignition sources if safe to do so.

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

Section 3: Composition/Information on Ingredients

Chemical Name	CAS No.	Concentration (% wgt)
n-Butane	106-97-8	70%
Propane	74-98-6	30%
(Trace impurities possible in commercial grades; may include isobutane, isopentane, etc.)		

Section 4: First-Aid Measures

Inhalation: Move to fresh air immediately. Provide oxygen or artificial respiration if needed. Seek medical attention if breathing is difficult or unconsciousness occurs (simple asphyxiant hazard).

Skin Contact: For frostbite (from liquid): Rinse with lukewarm water (do not remove clothing if frozen to skin). Do not rub affected area. Seek immediate medical attention.

Eye Contact: Rinse with plenty of water for several minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

Ingestion: Not applicable (gas at room temperature).

Most Important Symptoms: Drowsiness, dizziness, headache, nausea, confusion, loss of consciousness (high exposure); frostbite from liquid contact.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Dry chemical, CO \square , alcohol-resistant foam. For large fires: water spray/fog to cool containers.

Unsuitable: Water jet (direct on source may cause icing/spread).

Specific Hazards: Extremely flammable. Vapors heavier than air, may travel to ignition source and flash back. Containers may rupture/explode in heat. Combustion produces CO, CO \square .

Advice for Firefighters: Evacuate area. Use self-contained breathing apparatus and full protective gear. Cool cylinders with water spray from protected position. Do not extinguish leaking gas fire unless leak can be stopped safely (may reignite).

Section 6: Accidental Release Measures

Personal Precautions: Evacuate area. Eliminate ignition sources. Wear respiratory protection and flame-resistant clothing.

Environmental Precautions: Prevent entry into confined spaces, sewers, waterways (vapor may create explosion hazard).

Methods for Containment/Cleanup: Ventilate area. Stop leak if safe. Allow small releases to dissipate in well-ventilated area. For large: use explosion-proof equipment to recover or flare.

Section 7: Handling and Storage

Handling: Use only in well-ventilated areas or outdoors. Ground/bond containers. Avoid contact with liquid (frostbite). Use non-sparking tools.

Storage: Store in cool, dry, well-ventilated place away from heat/ignition sources. Protect cylinders from sunlight. Keep upright.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

- OSHA PEL: 1000 ppm (1800 mg/m³) TWA
- NIOSH REL: 800 ppm (1800 mg/m³) TWA
- ACGIH TLV: 1000 ppm TWA (butane, all isomers)

Engineering Controls: Explosion-proof ventilation, general dilution ventilation.

Personal Protective Equipment:

- Eye/Face: Safety glasses or goggles
- Skin: Insulated gloves for liquid handling
- Respiratory: Supplied-air respirator in confined spaces or high concentrations
- Other: Flame-resistant clothing, static-dissipative footwear

Section 9: Physical and Chemical Properties

Appearance: Colorless gas (liquefied under pressure)

Odor: Slight gasoline-like (often odorized in commercial use)

Odor Threshold: ~5000–20,000 ppm (approximate)

pH: Not applicable

Melting/Freezing Point: ≈ -138 °C (-216 °F)

Boiling Point/Range: ≈ -13 to -1 °C (8 to 30 °F) (mixture-dependent; higher than pure propane, lower than pure butane)

Flash Point: ≈ -76 to -60 °C (-105 to -76 °F) (closed cup, estimated) Autoignition

Temperature: ≈ 430–550 °C (806–1022 °F) (component range) LEL: ≈ 1.8–2.1% vol in air

UEL: ≈ 8.4–9.5% vol in air Vapor Pressure: ≈ 30–60 psig at 70 °F / 21 °C (higher than pure butane due to propane) Vapor Density: ≈ 1.6–2.0 (air = 1)

Relative Density (liquid): ≈ 0.55–0.58 g/cm³

Solubility in Water: Slightly soluble (~61 mg/L at 20 °C)

Partition Coefficient (n-octanol/water): log K_{ow} ≈ 2.3–2.9 (component range)

Section 10: Stability and Reactivity

Reactivity: Stable under normal conditions.

Chemical Stability: Stable.

Incompatible Materials: Strong oxidizers (e.g., chlorine, oxygen – violent reaction possible).

Hazardous Decomposition: Carbon oxides on combustion.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Acute Toxicity: Low (inhalation LC₅₀ very high >100,000 ppm range for

components).

Primary Routes: Inhalation.

Effects: Simple asphyxiant (oxygen displacement). CNS depression at high exposure. Liquid causes frostbite. No significant skin/eye irritation from vapor.

Chronic: No evidence of carcinogenicity, mutagenicity, or reproductive toxicity (not classified).

Section 12: Ecological Information

Ecotoxicity: Low (volatile gas, minimal aquatic impact).

Persistence/Degradability: Readily biodegradable in air via photodegradation.

Bioaccumulation: Low (log Kow 2.89).

Mobility: High (gas/vapor).

Section 13: Disposal Considerations

Dispose as hazardous waste per local/federal regulations. Vent to safe location or return cylinder to supplier. Do not incinerate cylinders.

Section 14: Transport Information

UN Number: UN1965

Proper Shipping Name: Hydrocarbon gas mixture, n.o.s. (Butane, Propane mixture)

Transport Hazard Class: 2.1 (Flammable gas)

Packing Group: Not applicable

Environmental Hazards: No

Special Precautions: Ground all equipment.

Section 15: Regulatory Information

U.S. Federal: OSHA – Hazardous; EPA TSCA – Listed; CERCLA RQ – No

State: Various state RTK lists (e.g., NJ, PA, CA)

International: GHS classified; WHMIS Class A (compressed gas), B1 (flammable gas)

Section 16: Other Information

NFPA 704: Health 1 | Flammability 4 | Instability 0 | Special –

HMIS: Similar ratings.

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