SDS

BUTANE FUEL 5 OZ.

Hazardous Ratings:
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

HMIS Hazard Class:
Fire = 4
Health = 1
Reactivity = 0

NFPA Hazard Class:
Fire = 4
Health = 1
Reactivity = 0

1. PRODUCT AND COMPANY IDENTIFICATION

Chemical Trade Name, synonyms: n-Butane, Isobutane, LP Gas, A-28

Chemical Family: Paraffin Series Hydrocarbon, LP Gas

Chemical Formula: C_4H_{10}

Marketer:
Steinel America Inc
9051 Lyndale Ave.
Bloomington, MN 55420

Phone Number: (952)-888-5950
Transportation Emergency: (800)-525-5053; 24 hours, 7 days a week

2. HAZARDS IDENTIFICATION

Classification Flammable Gas; Gases Under Pressure -Liquefied gas

Hazard pictograms

Signal word DANGER

Hazard Statements
EXTREMELY FLAMMABLE GAS
CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION
MAY FORM EXPLOSIVE MIXTURES WITH AIR
MAY CAUSE FROSTBITE

Precautionary Statements	Do not handle until all safety precautions have been read and understood Keep away from Open flames, heat, sparks, hot surfaces. - No smoking Use and store only outdoors or in a well-ventilated place. Leaking gas fire: Do not extinguish, unless leak can be stopped safely Eliminate all ignition sources if safe to do so Use a back flow preventive device in the piping. Do not open valve until connected to equipment prepared for use. Close valve after each use and when empty. Never put cylinders into unventilated areas of passenger vehicles. Protect from sunlight when ambient temperature exceeds 52°C (125°F).
Suggested Exposure Guideline	1000 ppm
Primary Route of Exposure	Inhalation, skin contact, eye contact
Inhalation	This product is an asphyxiate and may exhibit anesthetic properties at very high concentrations. Initial symptoms of exposure at these concentrations are disorentation, lack of coordination, rapid respiration, headache, and nausea. Continued exposure May result in unconsciousness, coma, and possible death.
Skin Contact	Vapors are not irritating. Freeze burns or frostbite possible if skin is in prolonged contact with vaporizing liquid.
Eye Contact	Same as skin contact.
Carcinogenicity	None of the components in this material are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Material	**CAS Number**	**PEL/TLV, Source**	**Percent**
N,Butane	106-97-8	1000 ppm, OSHA	15-25%
Isobutane	75-28-5	1000 ppm, OSHA	75-85%

4. FIRST AID MEASURES

Inhalation	Remove to fresh air. Artificial respiration, consult physician.
Skin Contact	For liquid contact, warm areas gradually and get medical attention if there is evidence of frost bite or tissue damage. Flush area with lukewarm water. Do not rub affected area. If blistering occurs, apply a sterile dressing. Seek medical attention.
Eye Contact	Flush eyes well with running water for 15 minutes. Seek medical attention
Ingestion	NA, product is gaseous at normal temperature and pressure.

Most important symptoms and effects

Acute	Anesthetic effects at high concentrations.
Delayed	None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.
Notes to Physician	Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

5. FIRE FIGHTING MEASURES

Flammability Category	Extremely Flammable (Reference - Consumer Product Commission, flame projection test for aerosol products, per 16 CFR 1500.45)
Extinguishing Media	If feasible, stop flow of gas. Use water to cool fire-exposed cans, surroundings and to protect personnel working on shut off. Water spray, dry powder or carbon dioxide can be directed at flame area, if gas flow cannot be stopped, to reduce fire intensity. Use caution when applying carbon dioxide to confined spaces. DO NOT COMPLETELY EXTINGUISH FLAME UNLESS GAS FLOW IS SHUT OFF!
Special Fire Fighting Procedures	For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. Avoid possible accumulations of vapors at floor level, as vapor is heavier than air. Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. This product is extremely flammable at all times. Keep away from any sources of inadvertent ignition, including heat, fire, sparks, or flame. Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely.
Unusual Fire and Explosion Hazards	This product presents an extreme fire hazard. Contents under pressure. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing Apparatus against the hazardous effects of normal products of combustion of oxygen deficiency. Petroleum gases are heavier than air and travel along the ground or into drains to possible distant ignition sources, causing an explosive flashback.
Hazardous Combustion Products	Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled	Protect from any ignition source, keep away from heat, fire, sparks, or flame. Ventilate area well. Avoid accumulation of vapor at low levels. Consult local fire authorities
Personal Precautions	Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any place where accumulation may occur. Ventilate area and allow to evaporate. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons downwind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.
Environmental Precautions	Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapors. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.
Methods for Containment and Clean-Up	Notify relevant authorities in accordance with all applicable regulations.
Waste disposal method	Dispose of in accordance with all local, state and federal regulations. Do not puncture or incinerate.

7. HANDLING AND STORAGE

Precautions to be taken in handling and storage	Do not store where temperature may exceed 120EF. Store away from, fire, sparks, or flame. Store in suitable area for hazardous materials storage. Store in cool, fireproof place. Keep containers tightly closed and properly labeled
D.O.T. Shipping Classification	Liquified Petroleum Gas
Hazard Class	U.N. 1075, 2.1
ID Number	None Label
Required Cartons	must be marked with Red Flammable Gas Diamond with White Letters

TSCA Statement: All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA Inventory or otherwise exempted from listing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Material	CAS Number	PEL/TLV, Source	Percent
N,Butane	106-97-8	1000 ppm, OSHA	15-25%
Isobutane	75-28-5	1000 ppm, OSHA	75-85%

Engineering Controls — If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Respiration Protection — If TLV is exceeded wear NIOSH-approved self-contained breathing device or respirator.

Ventilation — Must be adequate to maintaining airborne concentrations below established exposure limits, particularly at floor level as vapors are heavier than air.

Protective gloves — None needed for normal use. Thermal insulated gloves when handling if prolonged exposure is expected.

Eye Protection — Safety glasses or goggles recommended, face shield may be necessary

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point — Not Available

pH — Not Available

Melting/Freezing Point — Not Available

Flash Point (Method) — -117 °F

Lower Explosion Limit — 1.8% (vol.) Gas in air

Upper Explosion Limit — 8.5% (vol.) Gas in air

Pressure in can at 70EF — Approx. 30 psig

Vapor Density (Air=1) — Not Available

Solubility in water — Less than 0.1% by weight @70F

Specific Gravity (Water=1) — 0.5669

Percent Volatile by weight — 100%

Initial Boiling Point / Range:	15.5 TO +31.1 °F
Evaporation Rate (BuAce=1)	> 1 (Ethyl Ether = 1.0)
Vapor Density (air = 1.00)	2.006
Solubility in Water @ 70 °F	0.008%
Appearance and odor	Clear, colorless liquefied compressed gas with sweet petroleum odor, flash evaporates at room temperature when released from can.

10. STABILITY AND REACTIVITY

Stability	Stable when stored as a liquid in cans under its own pressure.
Conditions to avoid	Contact with sparks, high heat, open flame or any source of ignition.
Incompatibility (Materials to Avoid)	None
Hazardous Polymerization	Will not occur
Hazardous Decomposition Products	May produce carbon monoxide when oxidized with deficiency of oxygen, volatile hydrocarbon vapors

11. TOXICOLOGICAL INFORMATION

Primary Route of Exposure	Inhalation, skin contact, eye contact
Ingestion	Aspiration hazard
Inhalation	This product is an asphyxiate and may exhibit anesthetic properties at very high concentrations. Initial symptoms of exposure at these concentrations are disorientation, lack of coordination, rapid respiration, headache, and nausea. Continued exposure may result in unconsciousness, coma, and possible death.
Skin Contact	Freeze burns or frostbite possible if skin is in prolonged contact with vaporizing liquid. Vapors are not irritating.
Eye Contact	Liquid can cause severe irritation, redness, tearing, blurred vision, and possible freeze burns
Carcinogenicity	None of the components in this material are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

12. ECOLOGICAL INFORMATION

Toxicity	Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment. Classification: No classified hazards.

Persistence and Degradability	The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process.
Bioaccumulative Potential	Not expected as having the potential to bioaccumulate.
Mobility in Soil	Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found. In air, these hydrocarbons undergo photodegradation by reaction with hydroxyl radicals with half-lives ranging from 3.2 days for n-butane to 7 days for propane.
Other Adverse Effects	None anticipated.

13. DISPOSAL INFORMATION

Waste disposal recommendations	Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

14. TRANSPORT INFORMATION

In accordance with DOT

Transport document description	UN1011 Butane, 2.1 or UN1075 Liquefied Petroleum Gas
UN-No. (DOT)	UN1011 or UN1075
DOT Hazard Class	2.1 – Flammable gas
UN Proper shipping name	Butane
DOT Label	Flammable Gas
Special transport precautions	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

Transport by sea

UN-No. (IMDG)	1011
Proper Shipping Name (IMDG)	BUTANE
Class (IMDG)	2 - Gases
MFAG-No	115

Air transport	
UN-No.(IATA)	1011
Proper Shipping Name (IATA)	Butane
Class (IATA)	2
Civil Aeronautics Law	Gases under pressure/Gases flammable under pressure

15.REGLATORY INFORMATION

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard
Sudden release of pressure hazard
Fire hazard

16. OTHER INFORMATION

Precautions for usage	Do not use near heat, fire, flame or sparks. Avoid excessive breathing of vapor. Do not spray in direction of body. Use only in accordance with directions.

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Notice: This data represents typical values, not product specifications. No guarantee of accuracy or completeness is made. No responsibility is assumed for any kind of loss or damages arising from use of this data.

End of SDS