CHEMICAL SAFETY DATA SHEET

ISOBUTANE

1. IDENTIFICATION OF THE SUBSTANCE

Product name Iso-Butane
COMMON NAMES/ SYNONYMS Iso-Butane

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NUMBER	% VOLUME	PEL-OSHA	TLV-ACGIH
IsoButane Formula: C_4H_{10}	75-28-5	100	Simple asphyxiant	1000ppm

3 HAZARDS IDENTIFICATION

Hazards identification Rupture with violent force when cylinders exposed to fire. Flammable
Eye Effects Contact with liquid can cause severe irritation, redness, tearing, blurred vision and possible freeze burns.
Skin Effects Contact with liquid can cause frostbite
Ingestion Aspiration Hazard
Inhalation Effects Inhalation of vapor may produce anesthetic effects and feeling of euphoria. Prolonged overexposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from asphyxiation, depending on concentration and time of exposure

4 FIRST AID MEASURES

Skin and Eyes For Liquid contact, warm areas gradually and get medical attention if there is evidence of tissue damage. Flush area with plenty of water.
Ingestion Do not induce vomiting. Contact a physician immediately
Inhalation: Move victim to fresh air. If breathing has stopped, give artificial respiration. Administer oxygen and get medical help.

5 FIRE FIGHTING MEASURES

Conditions of Flammability Flammable liquid and vapor
Flash point Method -117°F
LEL(%) 1.8
UEL(%) 8.4
Fire and Explosion Hazards Butane is heavier than air and may travel a considerable distance to an ignition source. Butane is a flammable gas. Keep away from open flame and other sources of ignition. Do not allow smoking in storage areas or when handling.

11 TOXICOLOGICAL INFORMATION

General No data given.

12 ECOLOGICAL INFORMATION

General No data given.

13 DISPOSAL CONSIDERATIONS

Disposal considerations Mechanical recovery
Flare-Off at safe location (Vapors)
Exhaust to atmosphere in safe location (No open Flames)

General Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED, WITH ANY VALVE OUTLET PLUGS SECURED AND VALVE PROTECTION CAP IN PLACE to authorized distributor for proper disposal. Disposal must comply with federal, state, and local disposal laws.

14 TRANSPORT INFORMATION

Proper Shipping Name	IsoButane
UN Nr	UN 1075
Hazard Class	2.1
Labelling ADR	Flammable Gas
Other transport information	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 that they are firmly secured and: – cylinder valve is closed and not leaking. – valve outlet cap nut or plug (where provided) is correctly fitted. – valve protection device (where provided) is correctly fitted. – compliance with applicable regulations.

15 REGULATORY INFORMATION

The product is defined by OSHA in 29 CFR 1910.1200c as flammable Gas. Contact local government authority for more details.

16 OTHER INFORMATION

Although reasonable care has been taken in the preparation of this document we extend no warranties and make no representations as to the accuracy or completeness of the information contain herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s)

Extinguishing Media	Dry Chemical Extinguisher (B-C), water
Fire Extinguishing Instruction	If possible, stop the flow of gas. If the flow cannot be stopped, let the fire burn out while cooling the cylinder and the surroundings using a water spray. Avoid accumulation of unburned materials. Remove personnel in general area. Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear.
Unusual Fire and Explosion Hazards:	Vapors are heavier than air and may travel along the ground or may be moved by ventilation systems and ignited by pilot lights, other flames, sparks, heater, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point.

6 ACCIDENTAL RELEASE MEASURES

Avoid sources of ignition-Ventilate area. Immediately extinguish all ignition sources. Use water fog to evaporate or ventilate. Use appropriate protective equipment (See Section 8). Ventilate enclosed areas. Consult local fire authorities.

7 HANDLING AND STORAGE

Electrical Classification:	Not Available
Storage and Handling	Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat or ignition. Do not store with oxidizers. Prohibit smaking in areas of storage or use.

8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

Eye/Face Protection	Safety goggles or glasses.
Skin Protection	No special equipment is required. Gloves are recommended for cylinder handling.
Respiratory Protection	Approved respiratory equipment must be worn (NIOSH approved self-contained breathing apparatus) when airborne concentrations exceed safe levels. Gas displaces the air and causes a deficiency of oxygen and the possibility of asphyxiation.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state (gas, liquid, solid)	
Molecular Weight	58.12
Vapor pressure at 70°F (21.1°C)	31psig (213.74 kPa)
Vapor density (Air = 1)	2.006
Evaporation rate	> 1 (Ethyl Ether = 1.0)
Boiling point	10°F (-12°C)
Freezing point	-254 °F (-159°C)
Specific gravity	0.564
Solubility (H2O)	0.008%
Odor and appearance	colorless liquefied gas with sweet petroleum odor

10 STABILITY AND REACTIVITY

Stability	Stable
Incompatible materials/ Conditions	None High heat, sparks & open flames
Hazardous Decomposition Products	Carbon monoxide, volatile hydrocarbon vapors
Hazardous Polymerization	Can not occur.