

FTZ P/N 94600
Customer P/N CW3434

SDS: Safety Data Sheet

Version 1.0
Revision Date: 04/01/2015

SECTION 1: Identification

CAS No	106-97-8	Distributor	Pro Iroda
Name	Butane n-	Address	No. 68, 32nd Road, Taichung Industrial Park
Formula	C4H10	City	Taichung
Uses	Fuel for heating appliances.	State	
		Zip	
		Country	Taiwan
		Phone Number	886-4-23-599-599

SECTION 2: Hazard(s) Identification

Signal Word	Danger	
Hazard Statements	H220	Extremely flammable gas
Hazard Statements	H280	Contains gas under pressure; may explode if heated
Precautionary Statements	P202	Do not handle until all safety precautions have been re
Precautionary Statements	P210	Keep away from heat/sparks/open flames/hot surfaces
Other Hazards not contributing to the classification	None	
Unknown Acute Toxicity	No data available	

SECTION 3: Composition/Information on Ingredients

Name	Product Identifier	%
Butane n-	106-97-8	100%

SECTION 4: First-Aid Measures

First-aid measures after ingestion	Ingestion is not considered a potential route of exposure.
First-aid measures after eye contact	Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Get immediate medical attention.

First-aid measures after skin contact	For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). Water temperature should be tolerable to normal skin. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. In case of massive exposure, remove clothing while showering with warm water. Seek medical evaluation and treatment as soon as possible. Adverse effects not expected from this product.
First-aid measures after inhalation	Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

SECTION 5: Fire-Fighting Measures

Suitable extinguishing media	Carbon dioxide, Dry chemical, Water spray or fog.
Fire hazard	EXTREMELY FLAMMABLE GAS. If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device.
Explosion hazard	EXTREMELY FLAMMABLE GAS. Forms explosive mixtures with air and oxidizing agents.
Reactivity	No reactivity hazard other than the effects described in sub-sections below.
Firefighting instructions	Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.
Protection during firefighting	Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.
Special protective equipment for fire fighters	Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

Specific methods

Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas containers to rupture. Cool endangered containers with water spray jet from a protected position.

Prevent water used in emergency cases from entering sewers and drainage systems.

Stop flow of product if safe to do so. Use water spray or fog to knock down fire fumes if possible.

Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive reignition may occur. Extinguish any other fire

SECTION 6: Accidental Release Measures

General measures

Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Consider the risk of potentially explosive atmospheres. Try to stop release. Wear self-contained breathing apparatus when entering area unless atmosphere is proven to be safe. Evacuate area. Ensure adequate ventilation. Stop leak if safe to do so.

For non-emergency personnel

No additional information available

For emergency responders

No additional information available

Environmental precautions

Try to stop release. Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

Methods and material for containment and cleaning up

No additional information available

Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and Storage

Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep

closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

Storage conditions

Store only where temperature will not exceed 125°F (52°C). Post “No Smoking or Open Flames” signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g., NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16.

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

Specific end use(s)

None

SECTION 8: Exposure Controls/Personal Protection

Butane n- (106-97-8)

ACGIH	ACGIH TLV-STEL (ppm)	1000 ppm
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Appropriate engineering controls

An explosion-proof local exhaust system is acceptable. Local exhaust and general ventilation must be adequate to meet exposure standards. Mechanic (general) engineering controls: Use only in a closed system. Closed system, ventilation, explosion-proof electrical equipment and lighting.

Eye protection

Wear safety glasses with side shields or goggles when transfilling or breaking transfer connections. Wear safety glasses with side shields.

Thermal hazard protection

Wear cold insulating gloves when transfilling or breaking transfer connections. None necessary

Other information

Wear safety shoes while handling containers. Consider the use of flame resistant anti-static safety clothing. Wear leather safety gloves and safety shoes when handling cylinders.

SECTION 9: Physical and Chemical Properties

Physical state	Gas
Appearance	Colorless gas.
Molecular mass	58 g/mol
Color	Colorless.
Odor	No data available
Odor threshold	5000 ppm
pH	Not applicable.
Relative evaporation rate (butyl acetate=1)	No data available
Relative evaporation rate (ether=1)	Not applicable.
Melting point	-138 °C
Freezing point	No data available
Boiling point	-0.5 °C
Flash point	-60 °C TCC
Critical temperature	152.4 °C
EN (English US) SDS ID	P-4572 4/10
Auto-ignition temperature	400 °C
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapor pressure	200 kPa
Critical pressure	3796 kPa
Relative vapor density at 20 °C	No data available
Relative density	0.6
Specific gravity / density	0.573 g/cm ³ (at 25 °C)
Relative gas density	2.1
Solubility	Water 88mg/l
Log Pow	2.89
Log Kow	Not applicable.
Viscosity, kinematic	Not applicable.
Viscosity, dynamic	Not applicable.
Explosive properties	Not applicable.
Oxidizing properties	None.
Explosive limits	1.4 - 9.4 vol %

Gas group	Liquefied gas
Additional information	Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.
SECTION 10: Stability and Reactivity	
Reactivity	No reactivity hazard other than the effects described in sub-sections below.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Can form explosive mixture with air. May react violently with oxidants.
Conditions to avoid	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Incompatible materials	Oxidizing agent, Nickel carbonyl, Oxygen Mixtures.
Hazardous decomposition products	Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, and hydrogen. The welding and cutting process may form reaction products such as carbon monoxide and dioxide. Other decomposition products of normal operation originate from the volatilization, or oxidation of the material being worked.reaction,

SECTION 11: Toxicological Information

Acute toxicity	Not Classified
LC50 inhalation rat (mg/l)	658 g/m3 (Exposure time: 4 h)
ATE US (vapors)	658.000 mg/l/4h
ATE US (dust, mist)	658.000 mg/l/4h
Skin corrosion/irritation	Not classified pH: Not applicable
Serious eye damage/irritation	Not classified pH: Not applicable
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified. No known effects from this product.
Aspiration hazard	Not classified. Not applicable.

SECTION 12: Ecological Information (non-mandatory)

Ecology General	No ecological damage caused by this product.
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
Log Pow	2.89
Log Kow	Not applicable
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (low Kow <4). Refer to section 9.
Mobility in soil	No data available
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
Effect on ozone layer	None
Effect on the global warming	No known effects from this product.

SECTION 13: Disposal Considerations (non-mandatory)

Waste disposal recommendations	Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.
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SECTION 14: Transport Information (non-mandatory)

In accordance with DOT regulations

SECTION 15: Regulatory Information (non-mandatory)

US	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
Canada	Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas
EU	Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Australia	Listed on the AICS (Australian Inventory of Chemical Substances)
China	Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japan	Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Korea	Listed on the Korean ECL (Existing Chemicals List)
New Zealand	Listed on NZIoC (New Zealand Inventory of Chemicals)

Phillippines	Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List  U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other Information

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