

Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

1 Identification of substance

· **Product details**

· **Trade name: Butane UN1011 (Butane cartridge 2037)**

· **Supplier:**

BISMAR INC.
9, de Montgolfier st.,
Boucherville, Québec
Canada J4B 8C4

Tel. 1-800-266-1414

24 HOUR EMERGENCY TELEPHONE NUMBER:

CANUTEC 1-613-996-6666

2 Composition/Data on components

· **Chemical characterization:**

· **CAS No. Description**

106-97-8 Butane

· **Identification number(s)**

· **EINECS Number:** 203-448-7

601-004-00-0

3 Hazards identification

· **Hazard description:**

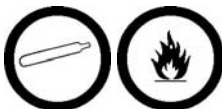


Extremely flammable

· **WHMIS-symbols:**

A - Compressed gas

B1 - Flammable gas



· **HMIS-ratings (scale 0 - 4)**

HEALTH 0 Health = 0

FIRE 4 Fire = 4

REACTIVITY 0 Reactivity = 0

(Contd. on page 2)

Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

Trade name: Butane

(Contd. of page 1)

· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 4
Reactivity = 0

· **Information pertaining to particular dangers for man and environment:**

Extremely flammable.

· **Classification system:**

The classification is in line with internationally approved calculation standards. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

· **GHS label elements**



Danger

2.2/1 - Extremely flammable gas.

· **Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

· **Response:**

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

Eliminate all ignition sources if safe to do so.

· **Storage:**

Store in a well-ventilated place.

* **4 First aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for at least 15 minutes under running water. Then consult a doctor.
- **After swallowing:** Not applicable

* **5 Fire fighting measures**

- **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Wear self-contained respiratory protective device.

* **6 Accidental release measures**

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Eliminate ignition sources
Stop leak - ONLY if possible to do so without risk.
- **Measures for environmental protection:** Prevent seepage into sewage system, workpits and/or cellars.

(Contd. on page 3)



Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

Trade name: Butane

(Contd. of page 2)

- **Measures for cleaning/collecting:** Ensure adequate ventilation.

7 Handling and storage

- **Handling:** Do not mix with air or oxygen above atmospheric pressure.
- **Information for safe handling:**
Open and handle cylinder with care.
Handle with care. Avoid jolting, friction, and impact.
Use only in well ventilated areas.
Store cylinders upright with valve protection cap in place and firmly secured to prevent falling or being knocked over.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Do not expose cylinder to temperatures higher than 50°C (122 °F)
- **Information about storage in one common storage facility:**
Store away from oxidizing agents.
Store separately from cylinders containing oxygen or oxidants by a minimum distance of 20' or by a barrier of non-combustible material at least 5' high having a fire resistant rating of at least 30minutes.
Sources of ignition should be removed from storage area.
- **Further information about storage conditions:**
Keep cylinder valve tightly closed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Store cylinder in a well ventilated area.
Store in accordance with local fire code and/or building code or any pertaining regulations.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**
Adequate local ventilation.
Safety showers and eyewash stations should be nearby.

- **Components with limit values that require monitoring at the workplace:**

106-97-8 Butane (23 - 100%)

EL	Short-term value: 750 ppm
	Long-term value: 600 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Protective clothing should be kept free of oil and grease.

(Contd. on page 4)

Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

Trade name: Butane

(Contd. of page 3)

PPE should be inspected and maintained regularly to retain its effectiveness.

· **Breathing equipment:**

Use atmosphere-supplying respirators (e.g. supplied-air: demand, pressure-demand, or continuous-flow or self-contained breathing apparatus: demand or pressure-demand or combination supplied-air with auxiliary self-contained air supply atmosphere-supplying respirator) in case of insufficient ventilation.

· **Protection of hands:**



Protective gloves.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Eye protection:** Safety glasses

9 Physical and chemical properties

95% Boiling Point: @101.3Kpa (760mmhg)	below 2°C (35.6°F)	Specific Gravity/Density (vs. Water @ 4°C/39.2°F)	0.60 mg/m ³
Vapor Pressure Maximum: @21°C (70°F)	2kg/cm ² (28.4Psig)	Percent Volatiles (Ambient/ 21°C/70°F)	not applicable
Vapor Density vs. Air=1 @15-32°C (60-90°F)	Heavier > 1.0	Evaporation Rate: (vs. n-Butyl Acetate=1)	not applicable
Solubility in Deionized Water: Negligible < 0.1% by wt % (Weight % @ 10°C/50°F)			
Ignition Temperature:	365°C	Explosion Limits:	
		Lower: 1.5 Vol %	Upper: 8.5 Vol %
Form: Gaseous	Color : Colorless	Odor: Odorant added - rotten eggs (Sulfur)	

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions**

May form explosive gas mixture with air.

May react with oxidizing agents.

· **Dangerous products of decomposition:** No dangerous decomposition products known.

(Contd. on page 5)

Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

Trade name: Butane

(Contd. of page 4)

11 Toxicological information

· **Acute toxicity:** -

· **LD/LC50 values that are relevant for classification:**

106-97-8 Butane

Inhalative	LC50/4hr	658 ppm (rat)
------------	----------	---------------

· **Primary irritant effect:**

· **on the skin:** No irritating effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

12 Ecological information

· **General notes:** Generally not hazardous for water.

13 Disposal considerations

· **Product:**

· **Recommendation:** Unused product should be returned to vendor.

· **Uncleaned packagings:**

· **Recommendation:**

Cylinder and unused product should be returned to vendor. Disposable cylinder must be disposed of in accordance with local regulations.

· **Recommended cleansing agent:** None applicable.

14 Transport information

· **TDG and DOT regulations:**



· **Hazard class:** 2.1

· **Identification number:** UN2037

· **Packing group:** -

· **Proper shipping name (technical name):** BUTANE

· **Label:** 2.1

· **Packaging group:** -

(Contd. on page 6)

Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

Trade name: Butane

(Contd. of page 5)

· Maritime transport IMDG:



- **IMDG Class:** 2.1
- **UN Number:** 2037
- **Label:** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Proper shipping name:** BUTANE

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 2037
- **Label:** 2.1
- **Packaging group:** -
- **Propper shipping name:** BUTANE

· **UN "Model Regulation":** UN1011, BUTANE, 2.1

15 Regulations

· Sara

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

(Contd. on page 7)



Material Safety Data Sheet

Version 3

Reviewed on 11/01/2013

Trade name: Butane

(Contd. of page 6)

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

Substance is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

Substance is not listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

Substance is listed.

· **Product related hazard informations:**

The product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

· **Hazard symbols:**

Extremely flammable

· **Risk phrases:**

Extremely flammable.

· **Safety phrases:**

Keep out of the reach of children.
Keep container in a well-ventilated place.
Keep away from sources of ignition - No smoking.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Please refer to the section 3 for NFPA and HMIS Hazard Codes.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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 contained 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).