

SECTION 1: Identification

1.1. Product identifier

| | |
|----------------|----------------------------------|
| Product form | : Substance |
| Substance name | : n-Butane (Compressed) |
| CAS-No. | : 106-97-8 |
| Product code | : CA-1001-05290 |
| Formula | : C ₄ H ₁₀ |
| Synonyms | : Butane |

1.2. Recommended use and restrictions on use

| | |
|-----------------------------------|-----------|
| Recommended uses and restrictions | : Various |
|-----------------------------------|-----------|

1.3. Supplier

Air Liquide Canada Inc.
 1250, René Lévesque West Blvd. Suite 1700
 H3B 5E6 Montreal, QC - Canada
 T 1-800-817-7697
www.airliquide.ca

1.4. Emergency telephone number

| | |
|------------------|----------------|
| Emergency number | : 514-878-1667 |
|------------------|----------------|

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Flammable gases, Category 1 H220
 Gases under pressure : Liquefied gas H280
 Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :



GHS02

GHS04

Signal word (GHS-CA) : Danger

Hazard statements (GHS-CA) : H280 - Contains gas under pressure; may explode if heated
 H220 - Extremely flammable gas
 OSHA-H01 - May displace oxygen and cause rapid suffocation
 CGA-HG01 - May cause frostbite
 CGA-HG04 - May form explosive mixtures with air

Precautionary statements (GHS-CA) : P381 - In case of leakage, eliminate all ignition sources
 P377 - Leaking gas fire: Do not extinguish unless leak can be stopped safely
 P403 - Store in a well-ventilated place
 P410+P403 - Protect from sunlight. Store in a well-ventilated place
 P202 - Do not handle until all safety precautions have been read and understood
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 P271 - Use only outdoors or in a well-ventilated area
 CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52 °C/125 °F
 CGA-PG05 - Use a back flow preventive device in the piping
 CGA-PG06 - Close valve after each use and when empty
 CGA-PG12 - Do not open valve until connected to equipment prepared for use.

2.3. Other hazards

Other hazards not contributing to the classification : None.

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

| Name | Chemical name/Synonyms | Product identifier | % | Classification (GHS-CA) |
|---|------------------------|--------------------|-----|--|
| n-Butane (Compressed) (Main constituent) | Butane | (CAS-No.) 106-97-8 | 100 | Flam. Gas 1, H220 Press. Gas (Liq.), H280 |

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures after inhalation | : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped. |
| First-aid measures after skin contact | : Adverse effects not expected from this product. |
| First-aid measures after eye contact | : Immediately flush eyes thoroughly with water for at least 15 minutes. |
| First-aid measures after ingestion | : Ingestion is not considered a potential route of exposure. |

4.2. Most important symptoms and effects (acute and delayed)

| | |
|---|--|
| Symptoms/effects after inhalation | : May displace oxygen and cause rapid suffocation. |
| Symptoms/effects after skin contact | : May cause frostbite. |
| Symptoms/effects after eye contact | : Contact with the product may cause cold burns or frostbite. |
| Symptoms/effects after ingestion | : Ingestion is not considered a potential route of exposure. |
| Symptoms/effects upon intravenous administration | : Not known. |
| Chronic symptoms | : Adverse effects not expected from this product. |
| Most important symptoms and effects, both acute and delayed | : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of coordination. Refer to section 11. |

4.3. Immediate medical attention and special treatment, if necessary

| | |
|-----------------------------------|------------------------------|
| Other medical advice or treatment | : Obtain medical assistance. |
|-----------------------------------|------------------------------|

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

| | |
|------------------------------|---|
| Suitable extinguishing media | : Use extinguishing media appropriate for surrounding fire. |
|------------------------------|---|

5.2. Unsuitable extinguishing media

| | |
|--------------------------------|---------------------------------------|
| Unsuitable extinguishing media | : Do not use water jet to extinguish. |
|--------------------------------|---------------------------------------|

5.3. Specific hazards arising from the hazardous product

| | |
|-------------------------------|--|
| Fire hazard | : This product is flammable. |
| Explosion hazard | : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form flammable/explosive vapour-air mixture. |
| Hazardous combustion products | : Incomplete combustion may form carbon monoxide. |

5.4. Special protective equipment and precautions for fire-fighters

| | |
|--------------------------------|--|
| Firefighting instructions | : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Exposure to fire may cause containers to rupture/explode. |
| Protection during firefighting | : Standard protective clothing and equipment (e.g. Self Contained Breathing Apparatus) for fire fighters. Do not enter fire area without proper protective equipment, including respiratory protection. |

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

| | |
|--|---|
| Specific methods | : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire. |
| Special protective equipment for fire fighters | : In confined space use self-contained breathing apparatus. Standard protective clothing and equipment (e.g. Self Contained Breathing Apparatus) for fire fighters. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves for firefighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|---|--|
| General measures | : Try to stop release. Evacuate area. Monitor concentration of released product. Consider the risk of potentially explosive atmospheres. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Eliminate ignition sources. Ensure adequate air ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. |
| Personal Precautions, Protective Equipment and Emergency Procedures | : EVACUATE ALL PERSONNEL FROM AFFECTED AREA. Use appropriate protective equipment. If leak is on user's equipment, be certain to purge piping before attempting repairs. If leak is on a container or container valve contact the closest Air Liquide Canada location. |

6.2. Methods and materials for containment and cleaning up

| | |
|--|--|
| For containment | : Try to stop release if without risk. |
| Methods for cleaning up | : Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Methods and material for containment and cleaning up | : Ventilate area. Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost). |

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------------|--|
| Precautions for safe handling | : Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Use only non-sparking tools. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. |
| Additional hazards when processed | : Pressurized container: Do not pierce or burn, even after use. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty. Handle empty containers with care because residual vapours are flammable. In use may form flammable vapour-air mixture. |
| Safe use of the product | : The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not smoke while handling product. Avoid exposure, obtain special instructions before use. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Avoid suck back of water, acid and alkalis. Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment. Purge air from system before introducing gas. Take precautionary measures against static discharge. Keep away from ignition sources (including static discharges). Consider the use of only non-sparking tools. |
| Safe handling of the gas receptacle | : Refer to supplier's container handling instructions. Do not allow backfeed into the container. Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Keep container valve outlets clean and free from contaminants particularly oil and water. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to transfer gases from one cylinder/container to another. Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. |

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--|---|
| Technical measures | : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed. |
| Storage conditions | : Do not expose to temperatures exceeding 52 °C/ 125 °F. Keep container closed when not in use. Protect cylinders from physical damage; do not drag, roll, slide or drop. Store in well ventilated area. |
| Incompatible products | : None known. |
| Incompatible materials | : Oxidizing materials. Air. |
| Conditions for safe storage, including any incompatibilities | : Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials. Segregate from oxidant gases and other oxidants in store. All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere. |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| n-Butane (Compressed) (106-97-8) | | |
|----------------------------------|-------------------------------|------------------------|
| USA - ACGIH | ACGIH STEL (ppm) | 1000 ppm |
| Canada (Quebec) | VEMP (mg/m ³) | 1900 mg/m ³ |
| Canada (Quebec) | VEMP (ppm) | 800 ppm |
| Alberta | OEL TWA (ppm) | 1000 ppm |
| British Columbia | OEL STEL (ppm) | 750 ppm |
| British Columbia | OEL TWA (ppm) | 600 ppm |
| Manitoba | OEL STEL (ppm) | 1000 ppm |
| New Brunswick | OEL TWA (mg/m ³) | 1900 mg/m ³ |
| New Brunswick | OEL TWA (ppm) | 800 ppm |
| New Foundland & Labrador | OEL STEL (ppm) | 1000 ppm |
| Nova Scotia | OEL STEL (ppm) | 1000 ppm |
| Nunavut | OEL STEL (ppm) | 1250 ppm |
| Nunavut | OEL TWA (ppm) | 1000 ppm |
| Northwest Territories | OEL STEL (ppm) | 1250 ppm |
| Northwest Territories | OEL TWA (ppm) | 1000 ppm |
| Ontario | OEL STEL (ppm) | 1000 ppm |
| Ontario | OEL TWA (ppm) | 800 ppm |
| Prince Edward Island | OEL STEL (ppm) | 1000 ppm |
| Saskatchewan | OEL STEL (ppm) | 1250 ppm |
| Saskatchewan | OEL TWA (ppm) | 1000 ppm |
| Yukon | OEL STEL (mg/m ³) | 1600 mg/m ³ |
| Yukon | OEL STEL (ppm) | 750 ppm |
| Yukon | OEL TWA (mg/m ³) | 1400 mg/m ³ |
| Yukon | OEL TWA (ppm) | 600 ppm |

8.2. Appropriate engineering controls

| | |
|----------------------------------|--|
| Appropriate engineering controls | : Product to be handled in a closed system and under strictly controlled conditions. Provide adequate general and local exhaust ventilation. Preferably use permanent leak-tight installations (e.g. welded pipes). Systems under pressure should be regularly checked for leakages. Ensure exposure is below occupational exposure limits (where available). Alarm detectors should be used when toxic gases may be released. Consider the use of a work permit system e.g. for maintenance activities. |
| Environmental exposure controls | : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment. |

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Protective clothing. Safety shoes.

Hand protection:

Wear working gloves when handling gas containers. Standard EN 388 - Protective gloves against mechanical risk. Wear chemically resistant protective gloves. Standard EN 374 - Protective gloves against chemicals. Hydrogenated Nitrile -Butadiene rubber (HNBR). Consult glove manufacturer's product information on material suitability and material thickness. The breakthrough time of the selected gloves must be greater than the intended use period.

Eye protection:

Wear safety glasses with side shields. Wear goggles when transfilling or breaking transfer connections. Standard EN 166 - Personal eye-protection - specifications

Skin and body protection:

Wear suitable protective clothing, e.g. lab coats, coveralls or flame resistant clothing.

Respiratory protection:

Gas filters do not protect against oxygen deficiency. Keep self contained breathing apparatus readily available for emergency use. Gas filters may be used if all surrounding conditions e.g. type and concentration of the contaminant(s) and duration of use are known. Use gas filters with full face mask, where exposure limits may be exceeded for a short-term period, e.g. connecting or disconnecting containers. Recommended: Filter AX (brown). Consult respiratory device supplier's product information for the selection of the appropriate device. Standard EN 14387 - Gas filter(s), combined filter(s) and full face mask - EN 136. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Self contained breathing apparatus is recommended, where unknown exposure may be expected, e.g. during maintenance activities on installation systems.



Thermal hazard protection:

None necessary.

Other information:

Consider the use of flame resistant anti-static safety clothing. Standard EN ISO 14116 - Limited flame spread materials. Standard EN ISO 1149-5 - Protective clothing: Electrostatic properties. Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | : Gas |
| Appearance | : Colorless gas. |
| Colour | : Colourless. |
| Odour | : Poor warning properties at low concentrations. Mildly aromatic. Sweetish. |
| Odour threshold | : No data available |
| pH | : Not applicable. |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Relative evaporation rate (ether=1) | : Not applicable for gases and gas mixtures. |
| Molecular mass | : 58.124 g/mol |
| Melting point | : -138.3 °C |
| Freezing point | : -138 °C |
| Boiling point | : 0.5500000000 °C |
| Flash point | : Not applicable for gases and gas mixtures. |
| Critical temperature | : 153.05 °C |
| Auto-ignition temperature | : 365 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : See Section 2.1 and 2.2 |
| Vapour pressure | : 1031.9727973808 mbar |

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

| | |
|----------------------------------|--------------------------------------|
| Vapour pressure at 50 °C | : No data available |
| Critical pressure | : 3796 kPa |
| Relative vapour density at 20 °C | : 2.05 |
| Relative density | : 0.6 |
| Density | : 0.573 g/cm ³ (at 25 °C) |
| Relative gas density | : 2.1 Heavier than air |
| Solubility | : Water: Insoluble |
| Log Pow | : 2.89 |
| Viscosity, kinematic | : Not applicable. |
| Viscosity, dynamic | : Not applicable. |
| Explosive properties | : Not applicable. |
| Oxidising properties | : None. |
| Explosive limits | : 1.4 - 9.4 vol % |

9.2. Other information

| | |
|------------------------|---|
| Gas group | : Press. Gas (Liq.) |
| Additional information | : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level |

SECTION 10: Stability and reactivity

10.1. Reactivity

| | |
|------------------------------------|---|
| Reactivity | : No reactivity hazard other than the effects described in sub-sections below. |
| Chemical stability | : May polymerise. Stable under normal conditions. |
| Possibility of hazardous reactions | : May react violently with oxidants. Can form explosive mixture with air. |
| Conditions to avoid | : Keep away from heat/sparks/open flames/hot surfaces. – No smoking. |
| Incompatible materials | : Air, Oxidisers. For additional information on compatibility refer to ISO 11114. |
| Hazardous decomposition products | : Under normal conditions of storage and use hazardous decomposition products should not be produced. |

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|-----------------------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Inhalation:gas: Not classified. |

| n-Butane (Compressed) (f)106-97-8 | |
|-------------------------------------|---|
| LC50 inhalation rat (mg/l) | 658 g/m ³ (Exposure time: 4 h) |
| LC50 inhalation rat (ppm) | 276789.28 ppm/4h |
| ATE CA (gases) | 276789.28000000 ppmv/4h |
| ATE CA (vapours) | 658.00000000 mg/l/4h |
| ATE CA (dust,mist) | 658.00000000 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 |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

| n-Butane (Compressed) (106-97-8) | |
|----------------------------------|-----|
| Hydrocarbon | Yes |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No data available.

12.2. Persistence and degradability

| n-Butane (Compressed) (106-97-8) | |
|----------------------------------|--------------------|
| Persistence and degradability | No data available. |

12.3. Bioaccumulative potential

| n-Butane (Compressed) (106-97-8) | |
|----------------------------------|---|
| Log Pow | 2.89 |
| Bioaccumulative potential | Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9. |

12.4. Mobility in soil

| n-Butane (Compressed) (106-97-8) | |
|----------------------------------|---|
| Log Pow | 2.89 |
| Ecology - soil | Because of its high volatility, the product is unlikely to cause ground or water pollution. |

12.5. Other adverse effects

Effect on global warming : No known effects from this product.

Effect on ozone layer : None.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Must not be discharged to atmosphere. Ensure that the emission levels from local regulations or operating permits are not exceeded. Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at <http://www.eiga.org> for more guidance on suitable disposal methods.

Product/Packaging disposal recommendations : Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more guidance on suitable disposal methods.

Additional information : None.

List of hazardous wastes : 16 05 04 *: Gases in pressure containers (including halons) containing dangerous substances.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

UN-No. (TDG) : UN1011

TDG Primary Hazard Classes : 2.1 - Class 2.1 - Flammable Gas.

Transport Document Description : UN1011 BUTANE, 2.1

Proper Shipping Name : BUTANE

Hazard labels (TDG) : 2.1 - Flammable gases



ERAP Index : 3 000

Explosive Limit and Limited Quantity Index : 0.125 L

Passenger Carrying Ship Index : Forbidden

Excepted quantities (TDG) : E0

Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : Forbidden

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

14.2. Transport information/DOT - USA

Department of Transport

DOT NA no. : UN1011
UN-No.(DOT) : 1011

Transport Document Description : UN1011 Butane, 2.1
Proper Shipping Name (DOT) : Butane
Contains Statement Field Selection (DOT) : DOT_TECHNICAL - Proper Shipping Name - Technical (DOT)

Class (DOT) : 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115
Division (DOT) : 2.1
Hazard labels (DOT) : 2.1 - Flammable gas



Dangerous for the environment : No

DOT Special Provisions (49 CFR 172.102) : 19 - For domestic transportation only, the identification number UN1075 may be used in place of the identification number specified in column (4) of the 172.101 table. The identification number used must be consistent on package markings, shipping papers and emergency response information.
T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Packaging Non Bulk (49 CFR 173.xxx) : 304
DOT Packaging Bulk (49 CFR 173.xxx) : 314;315
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg

DOT Vessel Stowage Location : E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Emergency Response Guide (ERG) Number : 115 (UN1011)

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.

Other information : No supplementary information available.

14.3. Air and sea transport

IMDG

UN-No. (IMDG) : 1011
Proper Shipping Name (IMDG) : BUTANE
Transport Document Description (IMDG) : UN 1011 BUTANE, 2.1
Class (IMDG) : 2 - Gases
MFAG-No : 115

n-Butane (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

| | |
|---------------------|---|
| Ship Safety Act | : Gases under pressure/Gases flammable under pressure(Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations) |
| Port Regulation Law | : Hazardous materials/High pressure gas (Article 21, Paragraph 2 of Law, Article 12 rule, notice attached table that defines the type of dangerous goods) |

IATA

| | |
|---------------------------------------|---|
| UN-No. (IATA) | : 1011 |
| Proper Shipping Name (IATA) | : Butane |
| Transport Document Description (IATA) | : UN 1011 Butane, 2.1 |
| Class (IATA) | : 2 |
| Civil Aeronautics Law | : Gases under pressure/Gases flammable under pressure(Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations) |

SECTION 15: Regulatory information

15.1. National regulations

n-Butane (Compressed) (106-97-8)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

n-Butane (Compressed) (106-97-8)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

SECTION 16: Other information

| | |
|-------------------|---|
| Date of issue | : 05/19/2017 |
| Training advice | : Ensure operators understand the flammability hazard. |
| Other information | : This Safety Data Sheet has been established in accordance with the applicable European Union legislation. |

Full text of H-statements:

| | |
|------|--|
| H220 | Extremely flammable gas |
| H280 | Contains gas under pressure; may explode if heated |

SDS Canada (GHS)

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.