



SAFETY DATA SHEET BUTANE BATTERY® (BUTANE CARTRIDGE)

According to Regulation (EU) No 453/2010

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name BUTANE BATTERY® (BUTANE CARTRIDGE)
Product No. D2, D4, P2, S4, S6, A4,

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Fuel for portable gas appliances.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier JFA Ltd
Riverside Mill Lane
Taplow
Berks SL6 0AA
Tel: 01628 637111
Fax: 01628 773030
chris@jfaexport.com

1.4. Emergency telephone number

+44 (0) 1628 637111 (Mon - Fri, 0900 - 1700)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards Flam. Gas 1 - H220; Press. Gas, Liquefied - H280
Human health Not classified.
Environment Not classified.

Classification (67/548/EEC)

F+;R12.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

See section 11 for additional information on health hazards.

Physical and Chemical Hazards

The product is extremely flammable and may ignite in the air at normal temperature and pressure. Explosive vapour/air mixtures may be spontaneously formed.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word

Danger

Hazard Statements

H220
H280

Extremely flammable gas.
Contains gas under pressure; may explode if heated.

Precautionary Statements

P102

Keep out of reach of children.

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P251	Pressurized container: Do not pierce or burn, even after use.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P403	Store in a well-ventilated place.
P410+412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
P501	Dispose of contents/container in accordance with local regulations.
Supplementary Precautionary Statements	
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

HYDROCARBONS, C3-4-RICH, PETROLEUM DISTILLATE; PETROLEUM GAS (< 0.1% 1,3-BUTADIENE)	100%
CAS-No.: 68512-91-4	EC No.: 270-990-9
Classification (EC 1272/2008) Flam. Gas 1 - H220	Classification (67/548/EEC) F+;R12.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Remove or isolate all sources of ignition. Provide adequate ventilation.

Inhalation

Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Place unconscious person on the side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

Ingestion of this chemical is unlikely

Skin contact

Remove affected person from source of contamination. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Promptly stop exposure and get medical attention if frostbite has occurred. Frostbite: Do not remove clothes, but flush with copious amounts of lukewarm water. Call an ambulance and continue to flush during transportation to hospital.

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Immediately flush with plenty of water or eyewash solution for up to 10 minutes. Frostbite: If there are signs of frostbite, (blanching or redness of skin or burning or tingling sensation), do not rub, massage or compress the affected area. Immediately transport to hospital or eye specialist.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation

May cause nausea, headache, dizziness and intoxication. Asphyxiating

Ingestion

Contact with liquid form may cause frostbite.

Skin contact

Contact with liquid form may cause frostbite.

Eye contact

Contact with liquid form may cause frostbite. Corneal damage.

4.3. Indication of any immediate medical attention and special treatment needed

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

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Extinguishing media

Small fires: Extinguish with dry sand. Foam, carbon dioxide or dry powder. Larger fires: Use: Water spray, fog or mist. Foam.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

During fire, toxic gases (CO, CO₂) are formed.

Unusual Fire & Explosion Hazards

May explode in a fire. Vapours are heavier than air and may spread near ground to sources of ignition.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours. Keep up-wind to avoid fumes. Eliminate all ignition sources if safe to do so. Keep run-off water out of sewers and water sources. Dike for water control.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Prevent entry into drains. Avoid discharge into drains, water courses or onto the ground. Provide adequate ventilation.

6.3. Methods and material for containment and cleaning up

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Let evaporate. Keep out of confined spaces because of explosion risk.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards.

For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Provide good ventilation. Only use with compatible / applicable appliances. Do not store in basements, cellars, etc., low-level points where vapours can accumulate or in vehicles (heating by sun).

7.2. Conditions for safe storage, including any incompatibilities

Flammable/combustible - Keep away from oxidisers, heat and flames. May attack some plastics, rubber and coatings. Store at temperature below 50°C. Keep in original container.

Storage Class

Flammable compressed gas storage

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ingredient Comments

No exposure limits noted for ingredient(s).

DNEL

Worker	Dermal	Long Term	Systemic Effects	23.4 mg/kg/day
Worker	Inhalation.	Long Term	Systemic Effects	2.21 mg/m ³
Consumer	Inhalation.	Long Term	Systemic Effects	0.0664 mg/m ³

8.2. Exposure controls

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Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

In case of inadequate ventilation use suitable respirator. CCR, Chemical cartridge respirator. Seek advice from supervisor on the companies' respiratory protection standards. Check that mask fits tight and change filter regularly.

Other Protection

Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent skin contamination or freezing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Gas
Colour	Colourless.
Odour	Pepper.
Solubility	Slightly soluble in water.
Initial boiling point and boiling range (°C)	-42.1 °C 1013 hPa
Melting point (°C)	-187.6 °C @ 1013 hPa
Relative density	0.423 g/cm ³ @ 25 °C
Vapour pressure	412.93 kPa @ 20 °C
pH-Value, Conc. Solution	Technically not feasible.
pH-Value, Diluted Solution	Technically not feasible.
Viscosity	Technically not feasible.
Solubility Value (G/100G H ₂ O@20°C)	0.00535
Decomposition temperature (°C)	Not determined.
Odour Threshold, Lower	Not applicable.
Odour Threshold, Upper	Not applicable.
Flash point (°C)	-87 °C
Auto Ignition Temperature (°C)	450 °C
Flammability Limit - Lower(%)	1.9
Flammability Limit - Upper(%)	8.5
Partition Coefficient (N-Octanol/Water)	log Pow 2.3058
Explosive properties	Not applicable.
Oxidising properties	Not applicable.

9.2. Other information

Not determined.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None noted.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

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Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances. Chlorine. Hydrogen chloride (HCl). Hydrogen fluoride (HF).

10.6. Hazardous decomposition products

Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity:

Acute Toxicity (Inhalation LC50)

> 800000 ppmV (gas) Rat 15 minutes

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Erythema/Eschar score

Technically not feasible.

Not irritating. Based on available data the classification criteria are not met.

Serious eye damage/irritation:

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation:

Based on available data the classification criteria are not met.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Chromosome aberration:

Negative.

Based on available data the classification criteria are not met.

Genotoxicity - In Vivo

Chromosome aberration:

Negative.

Based on available data the classification criteria are not met.

Carcinogenicity:

Carcinogenicity

NOAEC 10000 ppm Inhalation. Mouse

This substance has no evidence of carcinogenic properties.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Fertility: NOAEC 10000 ppm Inhalation. Rat P

This substance has no evidence of toxicity to reproduction. Based on available data the classification criteria are not met.

Reproductive Toxicity - Development

Maternal toxicity: NOAEC 10426 ppm Inhalation. Rat

This substance has no evidence of toxicity to reproduction. Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEC 10000 ppmV/6hr/day Inhalation. Rat

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Not anticipated to present an aspiration hazard based on chemical structure.

SECTION 12: ECOLOGICAL INFORMATION

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12.1. Toxicity

Acute Toxicity - Fish

LC50 96 hours 24.11 mg/l

Acute Toxicity - Aquatic Invertebrates

LC50 48 hours 46.6 mg/l Daphnia magna

Acute Toxicity - Aquatic Plants

EC50 96 hours 8.57 mg/l Freshwater algae

12.2. Persistence and degradability

Phototransformation

Air. DT50 1906 days

Biodegradation

Water Degradation (100%) 385.5 hours

The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product is not bioaccumulating.

Partition coefficient

log Pow 2.3058

12.4. Mobility in soil

Mobility:

Highly volatile. Volatile substances are degraded in the atmosphere within a few days.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Make sure containers are empty before discarding (explosion risk). Do not puncture or incinerate even when empty. This material and its container must be disposed of in a safe way. Dispose of waste and residues in accordance with local authority requirements. Recover and reclaim or recycle, if practical.

SECTION 14: TRANSPORT INFORMATION

General The product is packaged as Limited Quantity Packaging.

Air Transport Notes As supplied not packaged suitably for air.

14.1. UN number

UN No. (ADR/RID/ADN) 2037

UN No. (IMDG) 2037

14.2. UN proper shipping name

Proper Shipping Name RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

14.3. Transport hazard class(es)

ADR/RID/ADN Class Class 2: Gases

IMDG Class 2.1

Transport labels

No transport warning sign required.

14.4. Packing group

Not applicable.

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14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

EMS F-D, S-U
Tunnel Restriction Code Not applicable, packaged as Limited Quantity.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

Re-Issued SDS. Classification change. Sections amended: 1, 8, 9, 11, 12, 14

Revision Date 06-2013

Revision 1

Supersedes date 03-2011

Risk Phrases In Full

R12 Extremely flammable.

Hazard Statements In Full

H280 Contains gas under pressure; may explode if heated.

H220 Extremely flammable gas.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.