



Cartridge 190gr BUTANE

Issue date: 2014-01-02

Revision No. and date: 1/2014-01-02

Product name: CARTRIDGE 190gr BUTANE

SECTION 1. identification of the product and of the company

1.1 Product identifier

Trade name:	Cartridge 190gr butane
Name pursuant to Directive 67/548/EEC:	EC 270-681-9 Hydrocarbons C3 – C4, EN 417
Alternative names:	Liquefied petroleum gases; LPG Cartridge
Registration Code:	GS1-EMB 531 9990912 AAK
ID No.:	5319990912015
Registration Butane No.:	01-2119486557-22-XXXX

1.2 Relevant identified uses of the substance and uses advised against

Propane - butane is used as industrial heating fluid especially for household heating.
Propane-butane shall not be used for other purposes not specified by a relevant process documentation.
The use of propane-butane in a facility not approved for its use, is strictly prohibited.

1.3 Details on MSDS Supplier

1.3.1 Business Name and Identification No.

RAPID GAS DOOEL

ul. Gjorgji Kapcev 4/9

Skopje

Postcode 1000

Company ID: 5271118

Tax ID: MK 4019999105286

www. Rapidgas.com.mk

E-mail: rapid_gas@t-home.mk

1.3.2 Place of business

RAPID GAS dooel

Bogdanci

Macedonia

Tel. +389 34 222677

Fax: +389 34 222677

1.3.3 Person responsible for the Material Safety Data Sheet

Ing. Krstevski Igor tel.: +389 34 222677

E-mail: : rapid_gas@t-home.mk

1.4 Emergency telephone number

1.4.1 TRINS (Transport Information and Emergency System)

This system provides round-the-clock professional and practical assistance in managing emergency situations associated with the transport and/or storage of hazardous chemical substances in the **Macedonia, Serbia, Croatia and Hungary.**

Contact to Rapid gas dooel tel +389 34 222677

1.4.2 Toxicological Information Centre

Address: JZUUU Klinika za toksikologija

Ul. Vodnjanska 17,

Telephone: +389 2 31 47 635

contact@toxicocenter.com.mk

www.toxicocenter.com.mk

Information on health risks only – acute poisoning of humans and animals.

SECTION 2. Hazards identification

2.1 Classification of the substance

2.1.1 Pursuant to Regulation (EC) No 1272/2008 (CLP)

- a) Physico-chemical properties
Flammable gas: Flam. gas. 1, H220, GHS02, Dgr
Pressurized gas: Liquefied gas, H280, GHS04, Dgr

2.1.2 Pursuant to Council Directive 67/548/EEC (DSD)

- a) Physico-chemical properties: extremely flammable liquid, F+; R12

2.2 Label elements

2.2.1 Pursuant to Regulation (EC) No 1272/2008



Hazard indication:	GHS02	GHS04
Signal words:		Danger (Dgr)
Standard hazard phrases (H-phrases):		H220; H280
Precautionary statements (P-phrases):		P102; P210; P377; P381; P410+P403

2.2.2 Pursuant to Council Directive 67/548/EEC



Hazard indication:	F+
Specific risks (R-phrases):	R12
Safety phrases (S-phrases):	S2; S9; S16; S33

NOTE: For the text of the standard phrases see Section 16.

2.3 Other hazards

2.3.1 PBT Information

According to the criteria in the Annex XIII to the Regulation no. 1907/2006, the product does not contain PBT or vPvB substances.

2.3.2 Other Hazardous Impacts

Gaseous LPGs are heavier than air and may accumulate in lower-lying locations. It forms an explosive mixture with air. Higher concentrations of LPG vapours may have narcotic effects, cause headache, nausea, and eye and respiratory tract irritation. The product can accumulate static electric charge.

LPGs are kept under pressure in pressure vessels. When released into a space with atmospheric pressure, they vaporize by boiling at temperatures as low as -45°C , therefore there is a danger of frostbite in the case of contact of the liquefied gas and skin.

SECTION 3. Composition / Information on ingredients

3.1 Substances

The product contains the following hazardous substances:

<i>Substance (name)</i>	<i>Content, % (V/V)</i>	<i>CAS No.</i>	<i>EC No.</i>	<i>Registration No.</i>
Hydrocarbons C3 – C4; Refinery gas	> 99	68476-40-4	270-681-9	01-2119486557-22-XXXX

3.2 Mixtures

The product is not a mixture.

NOTE: For the text of the standard phrases see Section 16.

SECTION 4. First aid instructions

4.1 General instructions

When handling this product, comply with requirements for health and safety at work in accordance with applicable legislation and with this Material Safety Data Sheet.

If the danger of loss of consciousness exists, transport the victim in the recovery position.

4.2 Inhalation Hazards

Move the victim to fresh air, provide rest, do not allow the victim to walk. If breathing has stopped, apply mouth-to-mouth resuscitation. Seek medical attention.

4.3 Skin contact

Wash skin with water and soap, rinse, change clothes. If frostbite developed, do not use any ointments or powders; cover the frostbite with sterile gauze and seek medical attention.

4.4 Contact with Eye

Flush eyes thoroughly with plenty of water and seek medical attention.

4.5 Ingestion

Have the victim drink water. Do not induce vomiting. Seek medical attention.

SECTION 5. Fire fighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Foam, powder, carbon dioxide.

5.1.2 Unsuitable extinguishing media

Water (only suitable for cooling).

5.2 Special hazards arising from the substance or mixture

Product vapours form an explosive mixture with air. It burns with a sooty flame in air. Carbon monoxide may be released. LPG vaporizes quickly and forms cool mists; the gas is heavier than air and may form explosive mixtures in lower locations or above water surfaces. When released into the space with atmospheric pressure, it vaporizes by boiling at temperatures as low as -45°C.

5.3 Special Protective Equipment for Fire Fighters

Fire-resistant clothing, self-contained breathing apparatus.

SECTION 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Prevent contamination of clothes and shoes, prevent skin and eye contact. To escape a contaminated area, use a respirator fitted with an organic vapour cartridge. Do not smoke. Remove all potential sources of ignition. Evacuate all persons who are not participating in salvage operations.

6.2 Environmental Precautions

Prevent further leakage. Keep unauthorized persons out of the area. Do not drain the product into sewers. Prevent the product from leaking into soil and/or water.

6.3 Methods and material for containment and cleaning up

Pump the product off or absorb it into a suitable porous material and dispose of it in compliance with applicable legislation on wastes.

6.4 Reference to Other Sections

See sections 8 and 13

SECTION 7. Handling and storage

7.1 Safe handling precautions

Any person handling hazardous chemical substances and chemical preparations is obliged to protect human health and the environment and observe hazard symbols, standard phrases describing specific risks and standard safe handling instructions.

7.2 Conditions for safe storage of substances and mixtures, including any incompatibilities

Store in accordance with ČSN 65 0201. The design, construction, testing and operation of any equipment with LPG are subject to ČSN 38 6462. The building must be equipped as stipulated by ČSN 75 3415. Keep in a well-ventilated area away from ignition sources. Electrical equipment must conform to the respective regulations. Protect from electrostatic charge. Do not smoke.

7.3 Specific final uses

Propane-butane is used as industrial heating fluid especially for household, laboratory or industrial heating. Butane may only be used for approved purposes and in facilities approved for its use. Never drain into sewers.

SECTION 8. Exposure controls / Personal protection

8.1 Exposure limits

8.1.1 According to Government Resolution no. 361/2007 Coll.

		propane	butane
PEL	mg/m ³	900	2,350
NPK-P	mg/m ³	1,800	4,700

8.1.2 DNEL according to CSR

N/A.

8.2 Exposure controls

General safety and hygienic measures: Do not drink, eat or smoke while handling LPGs. Before meals and drinks and after work wash your skin with soap and warm water and apply a suitable moisturizing cream.

8.2.1 Worker exposure controls

<i>Respiratory protection:</i>	Escape mask with a filter against organic gases and vapours.
<i>Eye protection:</i>	Chemical type goggles.
<i>Hand protection:</i>	Protective gloves.
<i>Skin protection:</i>	Protective clothing

8.2.2 Environmental exposure controls

See also Clauses 2.1, 6.2 and 16.3.

SECTION 9. Physical and Chemical Properties

9.1 Basic physical and chemical properties

<i>Appearance (at 20°C):</i>	liquid
<i>Colour:</i>	colourless
<i>Odour:</i>	characteristic hydrocarbon odour
<i>Density at 15°C:</i>	500 to 580 kg/m ³
<i>Boiling point range:</i>	-42°C to 0°C
<i>Relative vapour density:</i>	approx 2 (air=1)
<i>Solubility in water:</i>	negligible
<i>Vapour pressure at 20°C:</i>	<0.9 MPa
<i>Flash point:</i>	<-40°C
<i>Explosion limits:</i>	<i>lower:</i> 1.5% (V/V) <i>upper:</i> 11.0% (V/V)
<i>Maximum experimental safe gap:</i>	>0.9 mm

9.2 Other information

<i>Pour point:</i>	<-40°C
<i>Ignition point:</i>	<-40°C
<i>Flash point:</i>	approx 430°C to 465°C
<i>Critical pressure:</i>	approx. 3.7 MPa
<i>Heat of combustion:</i>	approx. 50 MJ/kg

SECTION 10. Stability and reactivity

10.1 Reactivity

The product is stable under normal use conditions.

10.2 Chemical stability

The product is stable under normal use conditions.

10.3 Possibility of Hazardous Chemical Reactions

When burning with limited air carbon monoxide can be released.

10.4 Conditions to avoid

Concentrations within explosion limits, presence of ignition sources, contact with naked flames.

10.5 Incompatible materials

Oxidants.

10.6 Hazardous Decomposition Products

None under normal conditions; incomplete burning can produce carbon monoxide and soot.

SECTION 11. Toxicological Information

11.1 Acute toxicity

N/A

11.2 Skin causticity / irritation

N/A

11.3 Serious eye damage / irritation

N/A

11.4 Respiratory / skin sensitisation

N/A

11.5 Mutagenic Impacts in Elementary Cells

N/A

11.6 Carcinogenic effects

N/A

11.7 Toxicity for reproduction

N/A

11.8 STOT Single Exposure

N/A

11.9 STOT Repeated Exposure

N/A

11.10 Aspiration hazard

N/A

SECTION 12. Ecological Information

12.1 Toxicity

N/A

12.2 Persistency and Degradability

N/A

12.3 Bio-Accumulative Potential

N/A

12.4 Mobility in soil

N/A

12.5 PBT and vPvB Assessment Results

N/A

12.6 Other Adverse Effects

N/A

SECTION 13. Disposal considerations

13.1 Legal regulations on wastes

The product is categorized as follows pursuant to Act No. 185/2001 Coll., on wastes, as amended, and related regulations: **Not applicable**

13.2 Product disposal methods

Wastes and unused residues are disposed of in compliance with the applicable legislation on wastes, usually by incineration in the reserved incinerators. Dumping is inappropriate.

13.3 Contaminated container disposal

LPGs are supplied in road and railway tank cars. Decontamination and disposal of such containers are governed by applicable ADR/RID provisions.

SECTION 14. Transport information

The product is usually transported using railway and road tank cars.

Nomenclature and labelling in accordance with the European Agreement on Dangerous Goods RID/ADR (as amended):

GASEOUS HYDROCARBONS,	Hazard No.:	23	Classification code:	2F
LIQUEFIED MIXTURE, N.O.S.	UN No.:	1965	Class:	2
(B MIXTURE – propane-butane)			Packing group:	N/A



SECTION 15. Regulatory information

15.1 Regulations relating to safety, health and environment / Specific legislation applicable to the substance / mixture

- Regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended), and related rules and regulations
- 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 (CLP) (as amended), and related rules and regulations
- Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (DSD) (as amended)
- Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous preparations (DPD) (as amended)
- Act No. 111/1994 Coll., on road transport, as amended, and related regulations (ADR)
- Act No. 185/2001 Coll., on wastes, as amended, including the related regulations and provisions
- Act No. 201/2012 Coll., on air protection, as amended, and related regulations
- Act No. 254/2001 Coll., Water Act, as amended, and related regulations
- Act No. 266/1994 Coll., on railways, as amended, and related regulations and provisions (RID)
- Act No. 350/2011 Coll., Chemical Act, as amended, and related regulations and provisions
- EN 417 European specification concerning non-refillable metallic cartridges for liquefied petroleum gases

15.2 Chemical safety assessment

Has been performed.

15.3 Other Regulatory Information

15.3.1 Act No. 201/2012 Coll., on air conservation

The product is subject to the respective provisions of Act No. 86/2002 Coll., on air conservation, as amended, including the related regulations and provisions. Pursuant to Section 2 Para n) of the aforesaid Act, the product is a volatile organic substance.

SECTION 16. Other information

16.1 List of the relevant R-phrases, H-phrases, S-phrases and P-phrases

16.1.1 Hazard phrases (H-phrases):

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

16.1.2 Instructions for Safe Handling (P-phrases):

- | | |
|-----------|--|
| P102 | Keep out of the reach of children |
| P210 | Keep away from open flames and hot surfaces. – No smoking |
| P377 | Leaking gas fire – do not extinguish unless leak can be stopped safely |
| P381 | Remove all sources of ignition if you can do it without risk |
| P410+P403 | Protect from sunlight. Store in a well-ventilated place |

16.1.3 Standards Phrases for Specific Degree of Risk (R-Phrases)

- | | |
|-----|---------------------|
| R12 | Extremely flammable |
|-----|---------------------|

16.1.4 Standard Instructions for Safe Handling (S-Phrases)

- | | |
|-----|---|
| S2 | Keep out of the reach of children |
| S9 | Keep container in a well-ventilated place |
| S16 | Keep away from sources of ignition - No smoking |
| S33 | Take precautionary measures against static discharges |

16.2 Instructions for training

Training sessions are organized in accordance with the requirements of the Labour Code and Act No. 258/2000 Coll.

16.3 Information on changes

Changes in this Safety Data Sheet were made in accordance with the requirements of Regulation 1907/2006/EC (as amended) and Regulation No 1272/2008 (as amended), taking into account new information on the hazards of the substance gained during the registration procedure. The changes effected mainly concern formal aspects of the document.

16.4 Other information

Information contained in this Material Safety Data Sheet applies to the specified product only and is based on our current knowledge and experience and may not be comprehensive. Responsibility for proper product handling in accordance with applicable legislation lies with the user.