

Safety data sheet	Page: 1 of 10
	Issue date: 08-02-2018
Petroleum gases, liquefied gas cartridge	Revision date: 27-01-2020
	According to Regulation (EC) 1907/2006

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

1.1 Product identifier

Trade name	: LPG, liquefied petroleum gas, gas cartridge for use with chefs torch and with portable gas stove
CAS number	: 68476-85-7
EC number	: 270-704-2
Index number	: 649-202-00-6
Registration number	: Substance excluded from the registration obligation according to annex V of the REACH Directive
Synonyms	: Art. 199022 Gas canister 227gr Art. 199039 Gas canister set 4x 227gr Art. 198230 Gas canister 227gr with chefs torch Art. 198254 Gas canister 227gr with chefs torch

1.2 Relevant identified uses and uses advised against

Relevant identified uses	: Gas cartridge for use with chefs torch and portable gas stove.
Uses advised against	: This product should not be used for other applications than identified above.

1.3 Details of the supplier of the safety data sheet

Supplier	: Hendi b.v., Steenoven 21, 3911 TX Rhenen, Nederland tel: +31 (0)317 681040 info@hendi.eu www.hendi.eu
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1.4 Emergency telephone number	: NL NVIC Poison Centre: +31 (0)30 2748888 (only for medical personnel in case of acute or unintentional poisoning).
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SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLP Regulation (EC 1272/2008)	: Flam. Gas 1 (H220) Press. Gas., compressed gas (H280) Muta. 1B (H340) Carc.1A (H350)
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2.2 Label elements

CLP Regulation (EG 1272/2008)



Pictogram(s)	: GHS02
Signal word	: <u>Danger</u>

Hazard statements	: H220 Extremely flammable gas. H280 Contains gas under pressure; may explode if heated.
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Precautionary statements	: P102 Keep out of reach of children. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381 Eliminate all ignition sources if safe to do so. P403 Store in a well-ventilated place.
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According to Art. 23 and section 1.3.2 in Annex I of Regulation (EC) No. 1272/2008 [CLP], regarding derogations from labelling requirements, « If propane, butane and liquefied petroleum gas or a mixture containing these substances classified in accordance with the criteria of this Annex, is placed on the market in closed refillable cylinders or in non-refillable cartridges within the scope of EN 417 as fuel gases which are only

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gas cartridge**

released for combustion (current edition of EN 417, relating to 'Non-refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances; construction, inspection, testing and marking'), these cylinders or cartridges shall only be labelled with the appropriate pictogram and the hazard and precautionary statements concerning flammability.».

2.3 Other hazards

P235 Keep cool.
 P251 Do not pierce or burn, even after use.
 P402 Store in a dry place.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122 °F.

The gas cartridge may only be used in combination with appropriate gas appliances.

Follow the instructions delivered with the device.

Changing cartridges: close the gas valve on the device.

Remove the cartridge only in a well-ventilated area.

Replace the seal on damage or loss.

WARNING: DO NOT REFILL.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substance:

Chemical name	CAS number	EC number	Index number	% (v/v)	Hazard statements (CLP 1272/2008)
Petroleum gases, liquefied (Note K, S)	68476-85-7	270-704-2	649-202-00-6	99	Press. Gas Flam. Gas 1 (H220) Muta. 1B (H340) Carc. 1A (H350)

Note U: When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The full text of each relevant hazard statement is listed in Section 16.

Note K: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w 1,3-butadiene (EINECS No 203-450-8). If the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102) P210-P403 should apply. This note applies only to certain complex oil-derived substances in Part 3 of Annex VI to Regulation (EC) No 1272/2008.

Note S: This substance may not require a label according to Article 17 of Regulation (EC) No 1272/2008 (see section 1.3 of Annex I to that Regulation).

Full text of H-statements: see section 16.

3.2 Mixtures: Not applicable.

SECTION 4. FIRST AID MEASURES
4.1 Description of first aid measures

General

Contact with skin

- : When any doubt always seek medical attention.
- : Wash off immediately with soap and plenty of water. If skin irritation occurs: Get medical advice/attention. If there are symptoms such as frostbite and freezing, take the following process: warm the affected part with warm water of 41.7°C. Gently wrap the affected part in blanket. Take immediate medical action.

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| Contact with eyes | : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell. |
| Ingestion | : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical advice (show the label where possible). |
| Inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Maintain airway. In case of irregular breathing or respiratory arrest provide artificial respiration. If unconscious, place in the recovery position and seek medical advice. |

4.2 Most important symptoms and effects, both acute and delayed

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|-------------------|--|
| Contact with skin | : Contact with the product may cause cold burns or frostbite. |
| Contact with eyes | : May cause frostbite on contact with the liquefied gas. |
| Ingestion | : May cause gastric irritation. |
| Inhalation | : In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. |

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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|--------------------------------|---|
| Suitable extinguishing media | : Dry powder. Carbon dioxide (CO ₂). Alcohol resistant foam. Water spray.
Cool down canister / cartridge exposed to fire or high temperature with water at a safe distance (explosion hazard). |
| Unsuitable extinguishing media | : Do not use a solid water stream as it may scatter and spread fire. |

5.2 Special hazards arising from the substance or mixture

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|--|---|
| Fire hazard | : Extremely flammable gas. Heavier than air, vapours may travel long distances along ground, ignite and flash back to source. |
| Explosion hazard | : Contains gas under pressure; may explode if heated. Flammable or explosive vapour/air mixtures may be formed. |
| Hazardous decomposition products in case of fire | : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. |

5.3 Advice for fire fighters

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|---------------------------------------|---|
| Firefighting instructions | : Cool down the cartridges exposed to heat with a water spray. Move undamaged cartridges from immediate hazard area if it can be done safely. Spray from a distance to keep far away from any possible explosion. |
| Protective equipment for firefighters | : Extra personal protection: complete protective clothing including self-contained breathing apparatus. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.
 Emergency procedures: Immediately contact emergency personnel.

For emergency responders

Protective equipment: Use suitable breathing apparatus. Avoid contact with skin and eyes.
 Emergency procedures: Evacuate area. Exclude sources of ignition and ventilate the area.

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6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

For containment: Stop leak if safe to do so.

Methods for cleaning up: Eliminate every possible source of ignition. Contain and/or absorb spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Dispose in a safe manner in accordance with local/national regulations. Ventilate affected area.

6.4 Reference to other sections

For personal protection - section 8. Disposal - section 13

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Keep away from sources of ignition - No smoking. Content under pressure. Do not crush, puncture or incinerate. Avoid contact with eyes. Avoid breathing gas, mist, spray, vapours. Do not use in confined spaces. Handle empty cartridges with care because residual vapours are flammable. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage

Store in a cool dry place. Keep container tightly closed. Keep away from open flames, hot surfaces and sources of ignition. Store in a well-ventilated place. Avoid temperatures exceeding 50°C (122°F). Store away from direct sunlight or other heat sources. Remove all sources of ignition. Do not smoke and do not use open fire and sparking tools in the area of the warehouse. Keep away from food, drink and animal feeding stuffs.

7.3 Specific end use(s)

No additional information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values: LPG (CAS 68476-85-7)

No legal limit value has yet been set for this substance.

DNEL / PNEC values: LPG (CAS 68476-85-7)

- DNEL = not applicable
- PNEC = not applicable

8.2 Exposure controls

Appropriate engineering controls: Provide adequate ventilation. Use explosion-proof ventilating equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment: Gloves. Safety glasses.

Hand protection: Wear suitable gloves tested to EN 374. Breakthrough time : > 480 min. Thickness of the glove material > 0,13mm. Neoprene or natural rubber gloves.

Eye protection: Chemical goggles or safety glasses. OSHA

Skin and body protection: Wear suitable protective clothing. (tested and approved in accordance with OSHA requirements (29 CFR 1910.132) or equivalent).

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Gas filtering equipment (EN 141). OSHA

Personal protective equipment symbol(s):



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
9.1 Information on basic physical and chemical properties

Physical state	: Gas
Colour	: colourless
Odour	: faint odour
Odour threshold	: no data available
pH	: not applicable
Relative evaporation rate (butyl acetate=1)	: no data available
Melting point	: -187 - -138°C (from different components values)
Freezing point	: no data available
Boiling point	: -42 - -1°C (from different components values)
Flash point	: -104 - -60 °C (from different components values)
Auto-ignition temperature	: 287 - 466°C (based on different components values)
Decomposition temperature	: no data available
Flammability (solid, gas)	: Extremely flammable gas
Vapour pressure	: 1557 - 5625 mm Hg @ 20°C (based on different components values)
Relative vapour density at 20°C	: 1.5 - 2.6 (based on different components values)
Relative density	: 0.501 - 0.578 g/cm ³ @ 25°C (based on different components values)
Solubility	: no data available
Log Pow	: 2.36 - 2.89 (based on different components values)
Viscosity, kinematic	: no data available
Viscosity, dynamic	: no data available
Explosive properties	: no data available
Oxidising properties	: no data available
Lower explosive limit (LEL)	: 1.8 - 2.2 vol % (based on different components values)
Upper explosive limit (UEL)	: 8.4 - 9.5 vol % (based on different components values)

9.2 Other information

No additional information available.

SECTION 10. STABILITY AND REACTIVITY
10.1 Reactivity

Stable under normal conditions of use. Extremely flammable gas.
May form flammable/explosive vapour-air mixture.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No additional information available.

10.4 Conditions to avoid

Heat/sparks/open flames/hot surfaces. Direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents, nitric acid, chlorine dioxide.

10.6 Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects

Acute toxicity : Not classified

Petroleum gases, liquefied (68476-85-7)	
LC50 inhalation rat (mg/l)	658.000 mg/m ³

Skin corrosion/irritation : Not classified
 pH: Not applicable
 Serious eye damage/irritation : Not classified (based on available data, the classification criteria are not met)
 pH: Not applicable
 Additional information : Not irritating to rabbits on ocular application
 Respiratory or skin sensitisation : Not classified
 Germ cell mutagenicity : May cause genetic defects.
 Carcinogenicity : May cause cancer.
 Reproductive toxicity : Not classified
 STOT - single exposure : Not classified
 STOT - repeated exposure : Not classified
 Aspiration hazard : Not classified

11.2 Other information : Information regarding acute and/or delayed results of the exposure was defined on the basis of the information on product's classification and/or toxicological studies as well as the experience and knowledge of the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION
12.1 Toxicity:

Hazardous to the aquatic environment, short-term (acute): Not classified
 Hazardous to the aquatic environment, long-term (chronic): Not classified

12.2 Persistence and degradability

Not applicable.

12.3 Bioaccumulative potential

Low Pow: 2.36 - 2.89 (based on different components values)

12.4 Mobility in soil

Ecology – soil: Adsorbs into the soil. Low mobility (soil)

12.5 Results of PBT and vPvB assessment

No additional information available.

12.6 Other adverse effects

No additional information available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods : Do not incinerate cartridges, even when empty. Dispose of contents/cartridges to comply with applicable local, national and international regulations.
 Product/packaging disposal recommendations: Handle empty cartridges with care because residual vapours are flammable.

13.2 Other information : Take note of framework waste Directive (2008/98/EC) and Directive on packaging and packaging waste (94/62/EC).

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SECTION 14. TRANSPORT INFORMATION

14.1 UN number:

UN-No. (ADR) : 2037
 UN-No. (IMDG) : 2037
 UN-No. (IATA) : 2037
 UN-No. (ADN) : 2037
 UN-No. (RID) : 2037

14.2 UN proper shipping name:

Proper Shipping Name (ADR) : RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)
 Proper Shipping Name (IMDG) : RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)
 Proper Shipping Name (IATA) : Gas cartridges
 Proper Shipping Name (ADN) : RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)
 Proper Shipping Name (RID) : RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)
 Transport document description (ADR) : UN 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES), (Petroleum gases, liquefied), 2.1, (D)
 Transport document description (IMDG) : UN 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES), (Petroleum gases, liquefied), 2.1
 Transport document description (IATA) : UN 2037 Gas cartridges, (Petroleum gases, liquefied), 2.1
 Transport document description (ADN) : UN 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES), (Petroleum gases, liquefied), 2.1
 Transport document description (RID) : UN 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES), (Petroleum gases, liquefied), 2.1

14.3 Transport hazard class(es):



Transport hazard class(es) (ADR) : 2.1
 Transport hazard class(es) (IMDG) : 2.1
 Transport hazard class(es) (IATA) : 2.1
 Transport hazard class(es) (ADN) : 2.1
 Transport hazard class(es) (RID) : 2.1

14.4 Packing group:

Packing group (ADR) : Not applicable
 Packing group (IMDG) : Not applicable
 Packing group (IATA) : Not applicable
 Packing group (ADN) : Not applicable
 Packing group (RID) : Not applicable

14.5 Environmental hazards:

Product is not dangerous for the environment.

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14.6 Special precautions for user:

Overland transport

Classification code (ADR) : 5F
 Special provisions (ADR) : 191, 303, 344



Limited quantities (ADR) : 1 ltr
 Excepted quantities (ADR) : E0
 Packing instructions (ADR) : P003
 Special packing provisions (ADR) : PP17, RR6
 Mixed packing provisions (ADR) : MP9
 Transport category (ADR) : 2
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV12
 Special provisions for carriage - Operation (ADR) : S2
 Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG) : 191, 277, 303, 344
 Packing instructions (IMDG) : P003
 Special packing provisions (IMDG) : PP17
 EmS-No. (Fire) : F-D
 EmS-No. (Spillage) : S-U
 Stowage category (IMDG) : B
 Stowage and handling (IMDG) : SW2
 Properties and observations (IMDG) : Normally contain mixtures of liquefied Butane and Propane in various proportions for use in camping stoves, etc.
 MFAG-No : 126

Air transport

PCA Excepted quantities (IATA) : E0
 PCA Limited quantities (IATA) : Y203
 PCA limited quantity max net quantity (IATA) : 1kg
 PCA packing instructions (IATA) : 203
 PCA max net quantity (IATA) : 1kg
 CAO packing instructions (IATA) : 203
 CAO max net quantity (IATA) : 15kg
 Special provisions (IATA) : A167, A802
 ERG code (IATA) : 10L

Inland waterway transport

Classification code (ADN) : 5F
 Special provisions (ADN) : 191, 303, 344
 Limited quantities (ADN) : 1 L
 Excepted quantities (ADN) : E0
 Equipment required (ADN) : PP, EX, A
 Ventilation (ADN) : VE01
 Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID)	: 5F
Special provisions (RID)	: 191, 303, 344
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P003
Special packing provisions (RID)	: PP17, RR6
Mixed packing provisions (RID)	: MP9
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW9, CW12
Colis express (express parcels) (RID)	: CE2
Hazard identification number (RID)	: 23

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:

Not applicable

SECTION 15. REGULATORY INFORMATION
15.1.1 Safety, health and environmental regulations/legislation (EC)

REACH (EC 1907/2006)

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.2 Chemical safety assessment : No chemical safety assessment has been carried out.

SECTION 16. OTHER INFORMATION
16.1 Revision comments

A vertical line in the left margin indicates that there is a relevant amendment from the previous version.

16.2 Abbreviations and acronyms used in the safety data sheet

Hazards identification (Section 2)	: Flam. Gas 1 = Flammable gases, Category 1 Press. Gas = Gases under pressure Muta. 1B = Germ cell mutagenicity, Category 1B Carc. 1A = Carcinogenicity, Category 1A H220 = Extremely flammable gas H340 = May cause genetic defects. H350 = May cause cancer.
Toxicological information (Section 11)	: LC50 = Median lethal concentration
Ecological information (Section 12)	: PBT = Persistent bioaccumulative toxic chemical vPvB = Very persistent and very bioaccumulative
Transport information (Section 14)	: ADN = European Agreement concerning the international carriage of dangerous goods by inland waterways. ADR = European Agreement concerning the international carriage of dangerous goods by road.

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IATA = International Air Transport Association.
IMDG = International Transport of Dangerous Goods by sea
RID = International Regulations governing the carriage of dangerous goods by rail.

16.3 References and sources for data : Safety data sheet manufacturer
SER limits database

16.4 Other information and disclaimer

Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training. Persons related to the transportation of the dangerous goods in compliance with the ADR Agreement should be properly trained within the scope of performed tasks (general training, on-the-job training and training related to the safety issues).

All information given in this Safety Data Sheet is exclusively related to the product described and is provided assuming that the product will be used in a way and for the purposes as stated by the manufacturer. The information is based on our present state of knowledge and will be reviewed regularly. This Safety Data Sheet has only been set up with the intention to describe the safety aspects of the product and therefore should not be construed as guaranteeing specific properties of the product of concern or its suitability for a particular application. It is the user's own responsibility to take the precautionary measures described and also to take care that this information is complete and adequate for the use of this product. It is recommended to pass through the information in this Safety Data Sheet, whenever necessary in an adapted form, to all staff and interested parties of concern.

- *Changes, printing and typesetting errors reserved.*