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

1.1 Product identifier

Sievert Powergas disposable cartridge **2203, 175g, 300ml**
2204, 336g, 600ml

1.2 Relevant identified uses : Professional, heating, shining and cooling for do it yourself purpose.

Restrictions on Use : No data available.

1.3 Details of the supplier of the safety data sheet

Sievert UK Limited
Bridge Street
Holloway Bank
Wednesbury
WS10 0AW

Email enquiries@sievertuk.co.uk

1.4 Emergency Telephone Number (24 H)
0121 506 1809
01384 291 690

2. HAZARDS IDENTIFICATION

2.1 Classification & labelling elements according to regulation 1272/2008 (CLP)

Regulation (EC) No 1272/2008 (CLP)	
Hazard classes / Hazard categories	**Hazard Statement**
Extremely flammable gas.	H220
Contains gas under pressure: may explode if heated	H280

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms/symbols

Signal Word : Danger

Hazard Statements:
- H220: Extremely Flammable gas.

HEALTH HAZARDS:
Not classified as a health hazard under GHS criteria.

ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

Prevention:

- P102: Keep out of reach of children.
- P251: Pressurised container: Do not pierce or burn even after use.

Storage:

- P410 + P412: Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F

2.3 Other hazards.

Health Hazards : Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache and nausea.

High gas concentrations will displace available oxygen from the air; unconsciousness and death may occur suddenly from lack of oxygen.
Exposure to rapidly expanding gases may cause frost burns to eyes and/or skin.

Safety Hazards: Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger. Electrostatic discharge may cause fire.

3 Composition/Information on Ingredients

3.1 Substances

Ingredient	CAS No.	EINECS	REACH Registration No.	Concentration (Volume)
Butane	68476-85-7	270-704-2	Exempt	60 – 70%
Propane	68476-85-7	270-704-2	Exempt	30 – 40%

3.2 Mixtures

Preparation
A small quantity (typically <50ppm) of ethyl mercaptan or similar odorizing agent is commonly added to assist in leak detection.
Contains <0.1% 1,3 Butadiene.

Additional Information: Refer to section 15 for full text of EC R-phrases & CLP H/P-phrases.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures
Inhalation : Remove to fresh air. If breathing but unconscious, place in the recovery position. If breathing has stopped, apply artificial respiration. If heartbeat absent, give external cardiac compression.
Monitor breathing and pulse. Seek urgent medical advice.

Skin Contact: Do not remove clothing that adheres to skin due to freezing. In the event of frostbite, slowly warm the exposed area by rinsing with warm water. Otherwise: Obtain medical treatment immediately. Contaminated clothing may be a fire hazard and therefore should be soaked with water before being removed. Loosen tight clothing. Keep warm and at rest.

Eye Contact :DO NOT DELAY. Obtain medical treatment immediately. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eye with copious quantities of water.

Ingestion: In the unlikely event of ingestion, obtain medical attention immediately.

4.2 Most important symptoms/effects, acute & delayed

High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued exposure may result in unconsciousness and/or death.

4.3 Indication of immediate medical attention and special treatment needed

Treat symptomatically. Administer oxygen if necessary.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

5.1 Extinguishing Media

Shut off supply. If not possible and no risk to surroundings, let the fire burn itself out. Use foam, water fog for major fires. Use dry chemical powder, carbon dioxide, sand or earth for minor fires.

Unsuitable Extinguishing Media

Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from substance or mixture

Hazardous combustion products may include: Carbon monoxide. Unidentified organic and inorganic compounds. Sustained fire attack on vessels may result in a Boiling Liquid Expanding Vapour Explosion (BLEVE). Contents are under pressure and can explode when exposed to heat or flames. The vapour is heavier than air, spreads along the ground and distant ignition is possible.

5.3 Advice for fire-fighters

Wear full protective clothing and self-contained breathing apparatus.

Additional Advice: Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective equipment. Keep unprotected persons away. Remove all ignition sources.

6.2 Environmental Precautions

Use appropriate containment to avoid environmental contamination.

6.3 Methods and Material for Containment and Clean Up

Allow to evaporate. Do not flush with water.

Additional Advice: Vapour may form an explosive mixture with air.

For storage of large quantities please contact the supplier for further information

7. HANDLING AND STORAGE

General Precautions: Ensure good ventilation / exhaustion at the workplace.

7.1 Precautions for Safe Handling

This product can create a low temperature exposure hazard when released as a liquid. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Avoid prolonged or repeated contact with skin. Electrostatic charges may be generated during handling. Electrostatic discharge may cause fire.

7.2 Conditions for safe storage, including any incompatibilities

Protect from sunlight. Keep tightly sealed. Store in dry cool conditions. Store in a well-ventilated place

7.3 Cartridge Use

Open and handle receptacles with care

7.4 Disposal:

Do not pierce or burn container even after use.

For storage of large quantities please contact the supplier for further information

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure

Material	Source	Long Term	Short Term	Hazard Designation	Carcinogenic
Liquefied Petroleum Gas	LPG EH40 WEL	**1000mg mg.m³ 1750ppm 8 hour TWA**	**2180 mg.m³ 1250ppm 15mins**	Asphyxiant	NA

Use only with adequate ventilation, asphyxiant in high concentrations

8.2 Personal protective equipment

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

8.3 Eye protection. **:** Safety glasses recommended for use.

8.4 Hand protection. : Sturdy work gloves are recommended when using flammable gas cartridges.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance : Colourless. Liquid under pressure.

Odour	: Distinctive and unpleasant if stenched, odourless if unstenched...
pH	: Not applicable.
Initial Boiling Point and Boiling Range	: -42 °C / -44 °F
Freezing Point	: -188 °C / -306 °F.
Upper / lower Flammability or Explosion limits	: 2% -11 % in Air
Auto-ignition temperature	: 450 °C / 842 °F
Density	: 0.5
Specific Gravity of Vapour	: 1.5 at 15 °C (Air = 1.0)
Vapour pressure	: 6 – 6.5 bar at 15 °C : 11 - 12 bar at 55 °C
Flammability	: Extremely flammable.

9.2 Other Information

Other Information	: Not applicable.

10. STABILITY AND REACTIVITY

10.1 Reactivity	: No, product will not become self-reactive.
10.2 Chemical Stability	: Stable.
10.3 Possibility of Hazardous Reactions	**:** No hazardous, exothermic polymerization cannot occur.
10.4 Conditions to Avoid	: Heat, open flames, sparks and flammable atmospheres.
10.5 Incompatible Materials	: Strong oxidising agents.
10.6 Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects

Basis for Assessment	: Information given is based on product data, a knowledge of the components and the toxicology of similar products.
Likely Routes of Exposure	: Inhalation is the primary route of exposure although exposure may occur through skin or eye contact.
Acute Oral Toxicity	: Not applicable.
Acute Dermal Toxicity	: Not applicable.
Acute Inhalation Toxicity	: Low toxicity: LC50 >20 mg/l / 4.00 h, Rat
Skin Corrosion/Irritation	: Not irritating to skin.
Serious Eye Damage/Irritation	: Essentially non-irritating to eyes.
Respiratory Irritation	: Inhalation of vapours or mists may cause irritation to the

	respiratory system.
Respiratory or Skin Sensitisation	: Not expected to be a sensitiser.
Aspiration Hazard	: Not considered an aspiration hazard.
Germ Cell Mutagenicity	: Not considered a mutagenic hazard.
Carcinogenicity	: Not expected to be carcinogenic.
Reproductive and Developmental Toxicity	: Not expected to impair fertility. Not a developmental toxicant.
Specific target organ toxicity - single exposure	: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Specific target organ toxicity – repeated exposure	: Low systemic toxicity on repeated exposure.

Additional Information : Rapid release of gases which are liquids under pressure may cause frost burns of exposed tissues (skin, eye) due to evaporative cooling. High gas concentrations will displace available oxygen from the air; unconsciousness and death may occur suddenly from lack of oxygen. Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.

12. ECOLOGICAL INFORMATION

General

Not hazardous for water. Unlikely to pose a significant hazard to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods : Contact supplier if guidance is required.

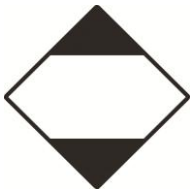
Do not discharge into areas where there is a risk of forming an explosive mixture with air.
Product to be recycled according to official regulations

Contaminated packaging : Return cartridge to supplier.

14. TRANSPORT INFORMATION

ADR, IMDG, IATA label

Limited Quantities (1 litre) label



Transport Category	UN No	UN proper Shipping Name	Transport Hazard Class	Danger Label Primary Risk	Environmental Hazard /Marine Pollutant
Land transport (ADR/RID)	2037	Receptacles small containing gas	2.1	2.1	No
Inland waterways transport (ADN)	2037	Receptacles small containing gas	2.1	2.1	No
Sea transport (IMDG Code)	2037	Receptacles small containing gas	2.1	2.1	No
Air transport (IATA/ICAO)	2037	Receptacles small containing gas	2.1 (Forbidden on passenger aircraft)	2.1	No
Classification code 5F					

Special Precautions : Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

Further Information **:** 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.
The transportation information is not intended to convey all specific regulatory data relating to this material.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

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

CLP Regulatory Data

Hazard Label Data
H220 : Extremely Flammable gas.
H280 : Contains gas under pressure; may explode if heated

Precautionary Phrases
P210 : Keep away from heat/sparks/open flame/hot surfaces- No Smoking.
P 211 Do not spray on an open flame or other ignition source
P102 : Keep out of reach of children.
P243 : Take precautionary measures against static discharge.
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
P410+P412 : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F+

15.2 Chemical Safety Assessment

No chemical safety assessment has been performed for this substance.

15.3 Safety health & environmental regulations / legislation specific for the substance or mixture.	Make sure that all national and local regulations are followed.

16. OTHER INFORMATION

Recommended Restrictions on Use (Advice Against)

This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier.

Additional Information

This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

Other Information

MSDS Distribution: The information in this document should be made available to all who may handle the product.