SAFETY DATA SHEET

In accordance with 1907/2006 annex II and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Issued 2022-04-14
Version number 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	SIP PowerGas
Article number	2202 GR, 2202 G
UFI:	0P00-D0ET-200G-W13K

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

Identified uses	Fuel

1.3. Details of the supplier of the safety data sheet

Company	Primus AB Box 6041 171 06 Solna Sweden
Telephone	08-564 842 30
E-mail	info@primus.se

1.4. Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Gas 1, H220
Press. Gas (Comp.), H280
(See section 16)

2.2. Label elements

Hazard pictogram

Signal word	Danger
Hazard statements	
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
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	In case of leakage, eliminate all ignition sources
P410+P403	Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards

This product does not contain any substances that are assessed to be a PBT or a vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
BUTANE		
CAS No: 106-97-8 EC No: 203-448-7 Index No: 601-004-00-0	Flam. Gas 1, Press. Gas (Comp.); H220, H280	60 - 80 %
PROPANE		
CAS No: 74-98-6 EC No: 200-827-9 Index No: 601-003-00-5 REACH: 01-2119486944-21	Flam. Gas 1, Press. Gas (Comp.); H220, H280	20 - 40 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms occur, call a doctor/physician.

Upon breathing in

Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Allow the injured person to rest in a warm place with fresh air, if symptoms persist seek medical advice.

Upon eye contact

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor.

Upon skin contact

Remove contaminated clothes.
Wash the skin with soap and water.

Upon ingestion

Rinse nose, mouth and throat with water.
Get medical attention if you feel unwell.

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

Generally

Contact with rapidly expanding gas may cause frostbite.

Upon breathing in

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

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

Symptomatic treatment.
Upon contact with a doctor, make sure to have the label or this safety data sheet with you.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Recommended extinguishing agents

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

Unsuitable extinguishing agents

Do not extinguish with a direct water jet.

5.2. Special hazards arising from the substance or mixture

Emits flammable vapours which may form an explosive mixture with air.
Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning.
In case of fire, high pressure may build up causing the packaging to explode.

5.3. Advice for firefighters

Evacuate all not-authorized personnel.
Protective measures should be taken regarding other material at the site of the fire.
In case of fire use proper breathing apparatus.
Wear full protective clothing.
Cool closed containers that were exposed to fire with water.
The containers should be moved away from the place of fire, if this can take place without risks.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Note, risk of ignition and explosion.
Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.
Switch off power at the main switch. Do not use the power switch in the room where the spillage has occurred.
Note, risk for formation of sparks due to static electricity. Do not remove clothing in a room where spillage has occurred.
Use recommended safety equipment, see section 8.
Do not inhale vapours and avoid contact with skin, eyes and clothes when cleaning up the spillage.
Ensure good ventilation.
Keep unauthorized and unprotected people at a safe distance.
Evacuate the accident area and call an ambulance, if relevant.
Use breathing apparatus when oxygen levels are low or unknown.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.
Prevent from entering sewers, basements and pits, or any place where gas accumulation could be dangerous.
Notify rescue services for larger spillage.

6.3. Methods and material for containment and cleaning up

Do NOT use tools emitting sparks when cleaning.
Let the gas from the leaking gas cylinders evaporate outdoors.
Residues left behind after cleaning shall be treated as hazardous waste. For further information, contact the local authority sanitisation works. Present this safety data sheet.
Ensure good ventilation after sanitation.

6.4. Reference to other sections

See also section 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Take the necessary preventive and protective measures for safe handling.
Implement appropriate engineering controls if necessary, see Section 8.
Use recommended safety equipment, see section 8.
Open fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.
The product may be electrostatically charged. Always ground the containers while transferring the contents from one container to another. Do not use tools that may cause sparks.
Do not inhale the product and avoid exposure to skin, eyes and clothing.
Store this product separately from food items and keep it out of the reach of children and pets.
Do not eat, drink or smoke in premises where this product is handled.
Check pipes and shut-off valves regularly for gas leakages.
Wash your hands after using the product.
Remove contaminated clothing.
Wash contaminated clothing before reuse.
Keep away from incompatible products.

7.2. Conditions for safe storage, including any incompatibilities

Take the necessary preventive and protective measures for safe storage.
Store separately from food and animal fodder, incl. utensils or surfaces which have been in contact with these things.
Keep out of reach for children.
Store tightly, in original packaging.
Always use sealed and visibly labeled packages.
Store in a well-ventilated space.
Store below 50 °C.
Keep away from heat and sunlight.
Store in dry and cool area.
Do not store close to incompatible materials (see section 10.5).

7.3. Specific end use(s)

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. National limit values
BUTANE
United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 600 ppm / 1450 mg/m^3
Short term exposure limit (STEL) 750 ppm / 1810 mg/m^3
Note Carc

Explanations of abbreviations are given in Section 16b

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

The risks posed by the product or its constituents must be considered in the task specific risk assessment, in accordance with current working environment legislation. The risk assessment should be reviewed regularly and updated if necessary.

8.2.1. Appropriate engineering controls

The ventilation in the workplace must ensure an air quality that meets the requirements of the current working environment legislation. Local exhaust ventilation should be used to remove airborne contaminants at the source.
Emergency showers and eye-rinsing facilities must be available at the workplace.

Eye/face protection

Eye protection should be worn if there is any danger of direct exposure or splashing.

Skin protection

Wear suitable protective clothing when necessary.
Use flame resistant work clothes when working with the product.
Use protective gloves fulfilling the standard EN374 if there is a risk of direct contact.
The most suitable protective glove should be chosen in consultation with the glove supplier, taking into account the risk assessment for the specific task and the properties of the chemicals involved. Note that the breakthrough time of the material is affected by the duration of the exposure, temperature conditions, abrasion, etcetera.
Based on the chemical properties of the product, the following glove materials are recommended (EN 374):.
– Butyl rubber.
– Viton.

Respiratory protection

Use appropriate respiratory protective equipment in case of insufficient ventilation.
The most appropriate respiratory protective equipment should be decided in consultation with the appointed safety representative, taking into account the risk assessment for the specific task.
Based on the physical and chemical properties of the product, the following filter type(s) and/or filter combination(s) are recommended:.
– AX.
Breathing apparatus may be required.

8.2.3. Environmental exposure controls

Work with the product should take place in such a way that the product does not get into drains, waterways, soil and air.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	Gas Form: Compressed gas
(b) Colour	colourless
(c) Odour	characteristic
(d) Melting point/freezing point	<-130 °C
(e) Boiling point or initial boiling point and boiling range	<-0.5 °C
(f) Flammability	Extremely flammable gas
(g) Lower and upper explosion limit	1.8 - 8.4 %
(h) Flash point	-74 °C
(i) Auto-ignition temperature	405 °C
(j) Decomposition temperature	Not indicated
(k) pH	Not indicated
(l) Kinematic viscosity	Not indicated
(m) Solubility	Not indicated
(n) Partition coefficient n-octanol/water (log value)	2.36 - 2.89
(o) Vapour pressure	PROPANE: ≈348.1 kPa (25 °C)
(p) Density and/or relative density	PROPANE: 1.556 Air = 1
(q) Relative vapour density	Not indicated
(r) Particle characteristics	Not indicated

9.2. Other information

9.2.1. Information with regard to physical hazard classes

(e) Gases under pressure	Critical temperature: PROPANE: 96.81 °C BUTANE: 153.2 °C

9.2.2. Other safety characteristics

Not indicated

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapour can create explosive mixtures with air.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.
Protect from heat and direct sunlight.

10.5. Incompatible materials

Avoid contact with strong acids and oxidizers.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.
Note that in case of inhalation of large quantities, there is risk of suffocation due to lack of oxygen.

Acute toxicity

The product is not classified as acutely toxic.

BUTANE

LC50 rat 4h: 658 mg/L Inhalation

Skin corrosion/irritation

The product is not classified for skin corrosion/irritation.

Serious eye damage/irritation

The product is not classified as irritant to the eyes.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant.

STOT-single exposure

The product is not classified for specific organ toxicity after single exposure.

STOT-repeated exposure

The product is not classified for specific organ toxicity after repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

The product does not have any known endocrine-disrupting properties.

11.2.2. Other information

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

The product is not to be labelled as a environmental hazard. However, it is not inconceivable that large emissions, or repeated small emissions, can have a harmful effect on the environment.

Prevent release on land, in water and drains.

12.2. Persistence and degradability

The product degrades in the natural environment.

12.3. Bioaccumulative potential

This product or its constituents are not expected to accumulate in nature.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Endocrine disrupting properties

The product does not have any known endocrine-disrupting properties.

12.7. Other adverse effects

Data lacking.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste handling of the product

Avoid discharge into sewers.

Product as well as packaging must be disposed of as hazardous waste.

Pressurized container: Do not pierce or burn, even after use.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

Classification according to 2008/98/EC

Recommended LoW-code: 16 05 04 Gases in pressure containers (including halons) containing dangerous substances
15 01 04 Metallicpac kaging

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number or ID number

2037

14.2. UN proper shipping name

RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

14.3. Transport hazard class(es)
Class

2: Gases

Classification code (ADR/RID)

5F: Aerosols, flammable

Labels

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user
Tunnel restrictions

Tunnel category: D

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Other transport information

Transport category: 2; Highest total quantity per transported unit 333 kg or liters
Stowage category not indicated (IMDG)

SECTION 15: Regulatory information

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

Not indicated.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet
Revisions of this document

This is the first version

16b. Legend to abbreviations and acronyms used in the safety data sheet
Full texts for Hazard Class and Category Code mentioned in section 3

Flam. Gas 1	Extremely flammable gas (Category 1) - Flam. Gas 1, H220 - Extremely flammable gas
Press. Gas (Comp.)	Gases under pressure: Compressed gas - Press. Gas (Comp.), H280 - Contains gas under pressure; may explode if heated

Explanations of the abbreviations in Section 8
United Kingdom

Carc Capable of causing cancer and/or heritable genetic damage

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road
RID Regulations concerning the International Transport of Dangerous Goods by Rail
IMDG International Maritime Dangerous Goods Code
ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IATA The International Air Transport Association
Tunnel restriction code: D; Passage forbidden through tunnels of category D and E type
Transport category: 2; Highest total quantity per transported unit 333 kg or liters

16c. Key literature references and sources for data
Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I , as updated to 2022-04-14.
Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
1272/2008	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
2008/98/EC	DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI .

16e. List of relevant hazard statements and/or precautionary statements
Full texts for hazard statements mentioned in section 3

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

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment
Warning for misuse

Not indicated.

Other relevant information

Not indicated

Editorial information

This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se