

SAFETY DATA SHEET

according to Regulation (EU) No. 453/2010

Primus PowerGas 2210xx

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code None.

Synonyms None.

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

Use of the Substance/Preparation Fuel

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification Primus AB
Box 6041
SE-171 06 SOLNA, Schweden
www.primus.se
Telefon +46-8-564 842 30
Telefax +46-8-564 842 40
info@primus.se

1.4. Emergency telephone number +46-8-564 842 30

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Version GHS 2

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP) Flammable gases, Cat. 1, H220
Compressed gas, H280

Additional information For the full text of the phrases mentioned in this Section, see

2.2. Label elements**Signal Word**

Danger

Hazard Statements

H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

Precautionary statements

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

P210b: 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.

P410+P403: Protect from sunlight. Store in a well-ventilated place.

Additional advice

None.

GHS product identifier

petroleum gas, CAS-No. 68476-85-7, EC-No. 270-704-2

2.3. Other hazards

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Also after use, do not open with force or burn. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep away from children.

3. Composition/information on ingredients
Chemical characterization

Extremely flammable liquefied gas.

Components		CLP Classification	Product identifier
petroleum gas	100%	Flam. Gas 1 H220, Press. Gas H280	CAS-No.: 68476-85-7 EC-No.: 270-704-2

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities

Petroleum gas: A mixture of 97% butane / isobutane and 3% propane. Additive also contains 4 ppm tert-butyl mercaptan odor. Does not contain 1,3-butadiene.

4. First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Medical examination necessary even only on suspicion of intoxication. Persons who have inhaled the gas or fumes produced in a fire or who have come into contact with the substance may not show immediate symptoms. They should be taken to a doctor with this card. Patient must be kept under medical supervision for at least 24 hours.
Skin contact	May cause frostbite. Wash off immediately with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
Ingestion	Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting. Medical examination necessary even only on suspicion of intoxication.

4.2. Most important symptoms and effects, both acute and delayed	Contact can cause cold burns, frostbite and/or chemical burns with severe skin damage. Symptoms of poisoning may only appear several hours later. Inhalation may provoke the following symptoms: Asphyxia.
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4.3. Indication of any immediate medical attention and special treatment needed	Artificial respiration and/or oxygen may be necessary.
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5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Carbon dioxide (CO ₂). Water spray mist or foam. Dry powder.
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Extinguishing media which must not be used for safety reasons	High volume water jet.
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5.2. Special hazards arising from the substance or mixture	Extremely flammable. Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind. Closed containers may explode due to pressure build-up when subjected to excessive heat or intense fire.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus. Complete suit protecting against chemicals.
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Specific methods	Do not use a solid water stream as it may scatter and spread fire. Water mist may be used to cool closed containers. Prevent fire extinguishing water from contaminating surface water or the ground water system.
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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel	Use personal protective equipment. Avoid contact with skin and eyes. Remove all sources of ignition. Pay attention to flashback. Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.
Advice for emergency responders	Keep people away from and upwind of spill/leak. Remove all sources of ignition. Pay attention to flashback. Ventilate the area. Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.

6.2. Environmental precautions No special environmental precautions required.

6.3. Methods and material for containment and cleaning up Ventilate the area.

6.4. Reference to other sections See chapter 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling	Wear personal protective equipment. Provide appropriate exhaust ventilation at machinery. Keep away from heat and sources of ignition. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
7.2. Conditions for safe storage, including any incompatibilities	Store in a cool and shaded area. Store in a place accessible by authorized persons only. Keep away from heat. Keep away from direct sunlight.
7.3. Specific end use(s)	See chapter 13.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) This information is not available.

Petroleum gases, liquefied (CAS 68476-85-7)	
Ireland - Occupational Exposure Limits - TWAs	1000 ppm TWA
Ireland - Occupational Exposure	1800 mg/m ³ TWA
	2250 mg/m ³ STEL

Limits - STELs	1250 ppm STEL
United Kingdom - Workplace	1250 ppm STEL
Exposure Limits (WELs) - STELs	2180 mg/m ³ STEL
United Kingdom - Workplace	1000 ppm TWA
Exposure Limits (WELs) - TWAs	1750 mg/m ³ TWA

8.2. Exposure controls

Occupational exposure controls Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. General industrial hygiene practice.

Personal protection equipment

Respiratory protection In case of good ventilation no personal respiratory protective equipment required. In case of insufficient ventilation wear suitable respiratory equipment. Respirator with filter for organic vapour

Hand protection Gloves made of latex.

Eye protection Safety glasses with side-shields.

Skin and body protection Long sleeved clothing.

Thermal hazards Keep product and empty container away from heat and sources of ignition.

Environmental exposure controls No special measures required.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Compressed liquefied gas.
Colour	Colourless.
Odour	Characteristic.
Odour Threshold	No information available.
pH:	No information available.
Melting point/range:	<-130 °C
Boiling point/range:	-0,5 °C
Flash point:	-74 °C
Evaporation Rate:	No information available.
Flammability:	No information available.
Explosion limits:	1,8 % - 10 %
Vapour pressure:	No information available.
Vapor density:	No information available.
Relative density:	No information available.
Water solubility:	No information available.
Partition coefficient (n-octanol/water):	No information available.
Autoignition temperature:	405 °C
Decomposition temperature:	No information available.
Viscosity:	No information available.
Combustion/explosion hazards:	Liquefied gas under pressure, flammable
Oxidizing properties:	None

9.2. Other information

General Product Characteristics No information available.

10. Stability and reactivity

10.1. Reactivity	Risk of receptacle bursting.
10.2. Chemical stability	Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions	Extremely flammable.
10.4. Conditions to avoid	Heat, flames and sparks. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
10.5. Incompatible materials	None.
10.6. Hazardous decomposition products	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data available.
Skin corrosion/irritation	No skin irritation. May cause frostbite.
Serious eye damage/eye irritation	No eye irritation. May cause cryogenic burns or injury.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Classification not possible from current data.
Reproductive toxicity	Classification not possible from current data.
Specific target organ toxicity (single exposure)	No data available.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	inhalativ

Symptoms related to the physical, chemical and toxicological characteristics

Contact can cause cold burns, frostbite and/or chemical burns with severe skin damage. Inhalation may provoke the following symptoms: Tiredness Drowsiness

Other information

Gas reduces oxygen available for breathing.

12. Ecological information

12.1. Toxicity

No data is available on the product itself.

12.2. Persistence and degradability

The product is degraded in the atmosphere.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

12.4. Mobility in soil

May evaporate quickly. Decomposes rapidly in contact with light.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products

EWC waste disposal No: 16 05 04 - Gase in Druckbehältern. Dispose of as hazardous waste in compliance with local and national regulations. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.

Contaminated packaging

Dispose of as unused product. Container hazardous when empty.

14. Transport information

ADR/RID

Proper shipping name AEROSOLS, flammable
UN No 1950.
Class 2.
ADR/RID-Labels 2.1.
Classification code 5F.
Risk No. 23.
Limited quantity 1 L.
Tunnel code D

IMDG	Proper shipping name Aerosols, flammable UN No 1950. Class 2. Packing group -. IMDG-Labels 2.1. Limited quantity Siehe SV277. EmS F-D, S-U. Marine Pollutant no
IATA	Proper shipping name Aerosols, flammable UN No 1950. Class 2.1. IATA label 2.1. Packing instruction (passenger aircraft): 203 (75 kg). Packing instruction (LQ): Y203 (30 kg G). Packing instruction (cargo aircraft): 203 (150 kg).
Further Information	None.

15. Regulatory information

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

Regulatory Information The product is classified and labelled according to Regulation (EC) No. 1272/2008 (GHS/CLP).

Petroleum gases, liquefied (CAS 68476-85-7)

EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Lower-Tier Requirements	50 tonne
EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Higher-Tier Requirements	200 tonne (listed under liquefied flammable gases, Category 1 or 2)
EU - Cosmetics (1223/2009) - Annex II - Prohibited Substances	Prohibited (containing >0.1% w/w Butadiene)
EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	Use restricted. See item 28. Use restricted. See item 29.
EU - REACH (1907/2006) - Appendix 4 - Mutagens: Category 1B (Table 3.1) / Category 2 (Table 3.2)	Present (K)
EU - REACH (1907/2006) - Appendix 1 - Carcinogens: Category 1A (Table 3.1) / Category 1 (Table 3.2)	Present (K)
EU - REACH (1907/2006) - List of Registered Substances	Present

15.2. Chemical safety assessment A Chemical Safety Assessment has been carried out for this substance.

16. Other information

Revision Note	Safety datasheet sections which have been updated: 2, 15.
Key or legend to abbreviations and acronyms	CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)
Key literature references and sources for data	According to information supplied by the manufacturer.
Classification procedure	Calculation method.
Full text of phrases referred to under sections 2 and 3	H220: Extremely flammable gas. H280: Contains gas under pressure; may explode if heated.
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.