PRIMAGAZ

Safety Data Sheet

Safety data sheet according to (EC) No. 1907/2006

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

1.1. PRODUCT IDENTIFIER

Propane

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

Professional/industrial and consumer use.
This product is exempted from REACH-registration according to article 2(7)(b).

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

Primagaz Sverige AB
Kraftverksvägen **Tel.:+46 (0)303 72 71 00**
444 32 Stenungsund
Sweden

Responsible person for the safety data sheet (e-mail): kundservice@primagaz.se

1.4. EMERGENCY TELEPHONE:

Sweden: Acute: 112 – Ask for the Poison Information Centre. In less acute cases: 010 4566700
(Direct Numbers to the Poison Information Centre).

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Extremely flammable gas under pressure.
CLP (1272/2008): Flam. Gas. 1;H220 Press. Gas; H280(Liq)

2.2. LABEL ELEMENTS:

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:	Eliminate all ignition sources if safe to do so.
P403:	Store in a well-ventilated place.

2.3. OTHER HAZARDS

- High concentrations of gas will displace oxygen in air. This may lead to sudden loss of consciousness and death due to oxygen deficiency (anoxia). Exposure to liquid Propane may cause cold burns on eyes and/or skin.
- Propane vapours are heavier than air at ordinary temperatures and may drift along the ground and reach distant ignition sources which may lead to back firing.
- PBT/vPvB: The ingredients are not considered PBT/vPvB according to criteria in Annex XIII.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. MIXTURES:

% W/W	SUBSTANCE NAME	CAS-NO.	EC-NO.	INDEX-NO.	CLASSIFICATION
>90	Propane	74-98-6	200-827-9	601-006-00-5	Flam. Gas 1;H220 Press. Gas;H280
<5	Butane (containing < 0.1 % butadiene)	106-97-8	203-448-7	601-004-00-0	Flam. Gas 1;H220 Press. Gas;H280

Wording of hazard statements - see section 16

SECTION 4: FIRST-AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES:

Inhalation:

- Move the affected person to fresh air.
- Mild cases: Remain at rest. If needed: seek medical attention.
- Severe cases: Place the person in recovery position and keep warm.
- If respiration has stopped, administer artificial respiration. Seek medical advice immediately.

Skin contact:

- Do not remove clothing that is adhering to the skin. Thaw frosted parts with lukewarm water. Do not rub affected area. In case of ulcers or skin disorders: Seek medical attention/advice immediately.

Eye contact:

- Immediately flush with water or physiological salt water, holding eye lids open, remember

to remove contact lenses, if any. If irritation persists: Get medical attention.

Ingestion:

- Not a likely exposure. Frostbite on lips and mouth must be rinsed with water – see "Skin contact".

Burns:

- Flush with water until pain ceases. Remove cloth that isn't burnt to the skin. If needed seek medical attention, continue to flush on the way.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

- High concentrations may lead to suffocation. Low concentrations may cause drowsiness. May cause irritation of skin and eyes, causing headache, dizziness and sudden loss of consciousness. Prolonged or frequent exposure to vapours of volatile organic compounds may result in damage on liver, kidneys, blood or central nervous system (including brain damage).

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

- Show this safety data sheet to a physician or emergency ward.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA:

- Shut off the gas supply.
- Use water spray or dry chemical.
- Do not use foam or carbon dioxide.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

- Risk of explosion (BLEVE) if pressurised containers are exposed to heat.
- Do not inhale smoke fumes.
- In case of fire, the product may form hazardous decomposition products such as oxides of carbon.

5.3. ADVICE FOR FIREFIGHTERS:

- Remove containers if possible or keep containers cool by spraying with water.
- Use soft jet of water to cool the containers.
- Use breathing apparatus with an independent source of air.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

- Use personal protective equipment - see section 8. Shut off the gas supply.
- Remove sources of ignition. Ventilate the area.

6.2. ENVIRONMENTAL PRECAUTIONS:

- Do not empty into drains - see section 12.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

- Ventilate the area. Shut off the gas supply. Further handling of spillage - see section 13.

6.4. REFERENCE TO OTHER SECTIONS:

- See references above.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING:

- Avoid inhalation vapours/mist. Provide adequate ventilation.
- Avoid contact with skin (frost damage) and eyes.
- Do not smoke.
- Wash skin with water and soap after use.
- Emergency shower is recommended.
- Do not use near fire, sparks or hot surfaces.
- Use explosion-proof equipment.
- Handling systems must be earthed and have equipotential bonding.
- Close the container valve after each use.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

- Store securely and out of reach of unauthorized personnel and separated from food, feed etc. To be kept only in closed and approved original pressure containers in a ventilated area. Empty containers that have not been cleaned should be treated as full containers. Do not remove labelling. Observe official regulations on storage of pressurized containers.

7.3. SPECIFIC END USE(S):

- See section 1.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS:

- Occupational exposure limits (Sweden): None
- DNEL/PNEC: No substances that are health or environmentally hazardous.

8.2. EXPOSURE CONTROLS:

- Appropriate engineering controls: Provide efficient ventilation. Pressure-bearing systems should be checked regularly for leaks.
- Gas detectors should be used when combustible gases can escape.

Personal protective equipment:

Inhalation:

- Respiratory equipment is normally not required by sufficient ventilation. In case of inadequate ventilation: Use an approved mask (EN136) with a gas filter type AX (brown – organic vapours).

  The filter has a limited lifetime and must be changed. Follow the instructions.

Skin:

- Wear protective gloves against mechanical risks (EN388) when handling gas containers.
- If necessary use, flame resistant, anti-static work clothes (Shoes (EN ISO 20345); Clothing (EN ISO 1149-5)).

Eyes:

- Wear tight fitting safety goggles (EN166) when filling or opening connectors.

Environmental exposure controls: None.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Colorless, compressed liquid gas
Odour:	Of added odorant
pH 10% solution:	Not relevant
Melting point / freezing point (°C):	-188
Initial boiling point and boiling range (°C):	-46
Decomposition temperature (°C):	Not determined
Flash point (°C):	Combustible gas (-100°C)
Evaporation rate:	Instant at > -31°C
Flammability (solid, gas) (°C):	470
Upper/lower flammability or explosive limits (vol-%):	1.8 – 11.1
Vapour pressure (bar, 25°C):	9
Vapour density (air=1) (g/ml):	1.5 (heavier than air)
Relative density (g/ml):	0.6
Solubility (water, mg/l):	75 (slightly soluble in water)
Partition coefficient: n-octanol/water, Log K_{ow}:	2.36 (Propane)
Auto-ignition temperature (°C):	Not relevant
Viscosity:	Not relevant
Explosive properties:	Not relevant
Oxidising properties:	None

9.2 ANNAN INFORMATION:

Ingen speciella.

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY:
No available data.

10.2.CHEMICAL STABILITY:
Stable under normal conditions (see section 7).

10.3.POSSIBILITY OF HAZARDOUS REACTIONS:
Vapours can be ignited by a spark, glow or a hot surface. Vapours are heavier than air and may form explosive mixtures with air. May drift along the ground and reach distant ignition sources which may lead to back firing.

10.4.CONDITIONS TO AVOID:
Formation of sparks and glows. Excessive heating and sources of ignition.

10.5.INCOMPATIBLE MATERIALS:
May react with strong oxidizing agents.

10.6.HAZARDOUS DECOMPOSITION PRODUCTS:
In case of extensive heating or fire the mixture may form hazardous decomposition product such as oxides of carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS:

Hazard class	Data	Test	Data source
Acute toxicity: Inhalation Dermal Oral	 LC50 (inhalation, rat) = 658 mg/l/4h (Butane) LC50 (skin, rat) > 2000 mg/kg (Butane/Propane) LC50 (ingestion, rat) > 5000 mg/kg (Butane/Propane)	 No information No information No information	 IUCLID Concawe Concawe
Corrosion/ irritation:	No eye irritation, rabbit (Butane/Propane)	No information	IUCLID
Sensitization:	No available/applicable data	-	-
CMR:	No bacterial mutagenicity (Butane/Propane) No available data, reproductive toxicity (Butane/Propane) No available data, carcinogenicity (Butane/Propane)	Ames - -	IUCLID - -

Information on likely routes of exposure: Skin, lungs and gastrointestinal tract.

SYMPTOMS:

Inhalation:
Vapours and aerosol mist may cause irritation to the airways. Inhalation of larger amounts may induce discomfort, nausea, dizziness, headache, narcosis and unconsciousness.

Skin:
May cause cold burns and destroy skin tissue.

Eyes:
May cause cold burns and give irreversible damage to the eye.

Ingestion:
Not a likely exposure. Frostbite on lips and mouth must be rinsed with water – see “Skin”.

Chronic effects:
Prolonged or frequent exposure to vapours of volatile organic compounds may result in damage on liver,kidneys, blood or central nervous system (including brain damage).

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY:

Aquatic	Data	Test (Media)	Data source
Fish	LC_{50} (fish (not specified), 96h) > 1000 mg/l (Propane)	No information	IUCLID
Daphnia	EC^{50} (daphnia, 48h) = 27 mg/l (Propane)	ECOSAR Calc.	ECHA
Algae	EC^{50} (green algae, 72h) = 11 mg/l (Propane)	ECOSAR Calc.	ECHA

112.2. PERSISTENCE AND DEGRADABILITY:

- Propane and Butane are rapidly degradable (OECD 301).

12.3. BIOACCUMULATIVE POTENTIAL:

- Log K_{ow} = 2.38 (Propane); 2.89 (Butane) – Low bioaccumulation potential.

12.4. MOBILITY IN SOIL:

- Butane and propane are gasses by normal, atmospheric pressure and mixes with the surrounding air.
- K_{oc} (calculated) < 10 - Very high mobility expected in soil environments

12.5. RESULTS OF PBT AND VPVB ASSESSMENT:

- The ingredients are not considered PBT/vPvB according to criteria in Annex XIII.

12.6. OTHER ADVERSE EFFECTS:

- None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS:

- The product is to be considered as hazardous waste.
- Used or empty pressurised containers should be returned to Primagaz

EWC-code:

- 16 05 04 (Pressurised container with mixture)

SECTION 14: TRANSPORT INFORMATION

14.1 UN-NO.:

- 1965 (ADR/RID/IMDG)

14.2 UN PROPER SHIPPING NAME:

- HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Propane) (ADR/RID/IMDG)

14.3 TRANSPORT HAZARD CLASS(ES):

- 2 (ADR/RID); 2.1 (IMDG)

14.4 PACKING GROUP:

- None (ADR/RID/IMDG)

14.5 ENVIRONMENTAL HAZARDS:

- No.

14.6 SPECIAL PRECAUTIONS FOR USER:

- None.

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE:

- Not relevant.

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

- Must not be used by persons under 18 years of age.
- The employer shall assess the working conditions and, if there is any risk to the safety or health and any effects on the pregnancy or breastfeeding of workers, take the necessary measures to adjust the working conditions (Directive 92/85/EEC).

15.2. CHEMICAL SAFETY ASSESSMENT:

- No CSR.

SECTION 16: OTHER INFORMATION

Hazard statements mentioned in section 2 and 3:

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

Abbreviations:

CMR = Carcinogenicity, mutagenicity and reproductive toxicity.
CSR = Chemical Safety Report
DNEL = Derived No-Effect Level
EC_{50} = Effect Concentration 50 %
ECHA diss. = European Chemical Agency Registration dossier
FW = Fresh Water
LC_{50} = Lethal Concentration 50 %
LD_{50} = Lethal Dose 50 %
PBT = Persistent, Bioaccumulative, Toxic
PNEC = Predicted No-Effect Concentration
vPvB = very Persistent, very Bioaccumulative

Literature:

ECHA diss. = European Chemical Agency Registration dossier
EPA Ecotox = The US Environmental Protection Agency's database on ecotoxicological effects for chemicals.
IUCLID = International Uniform ChemicaL Database Information
RTECS = Register of Toxic Effects of Chemical Substances.

Training advice:

No special training is required. However, the user should be well instructed in the execution of his/her task, be familiar with this Safety Data Sheet and have normal training in the use of personal protective equipment.

Changes since the previous edition:

Not relevant

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