

Carbon dioxide

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

1.1. Product identifier

Trade name

Carbon dioxide

CAS number

124-38-9

EC number

204-696-9

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

Relevant identified uses

Fire extinguishers.

1.3. Details of the supplier of the safety data sheet

Supplier

Presto Brandsäkerhet AB

Street address

Värmbolsvägen 2, Box 315

64123 KATRINEHOLM

Sweden

Telephone

+46 (0)10-45 20 000

Email

info@presto.se

1.4. Emergency telephone number

NHS 111

Available outside office hours

Yes

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Gases under pressure, Compressed gas

Hazard statements

H280

Carbon dioxide

Description

For the complete meaning of H phrases mentioned in this section, see section 16.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Warning

Hazard statements

H280 Contains gas under pressure; may explode if heated.

Precautionary statements

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

2.3. Other hazards

The product does not meet the PBT and vPvB criteria of REACH regulation, Annex XIII.
The substance is not considered to have endocrine disrupting properties.
Risk of frostbites from direct contact with liquid gas. High concentrations can displace the normal air and cause suffocation from lack of oxygen.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrases M factor acute M factor chronic	Note
Carbon dioxide	124-38-9 204-696-9 - -	100%	Press. Gas	H280 - -	-

Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

If symptoms occur, consult a physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing stops, provide artificial respiration. Put victim at rest, cover with a blanket and keep warm. Get medical attention immediately.

Skin contact

Heat the exposed body part in lukewarm water if cold injury occurs. Do NOT use warm water. Frostbite should be treated by a doctor.

Eye contact

Remove contact lenses if that's the case.
Rinse eyes with water as a precautionary measure.
Continue to rinse for at least 15 minutes.
Get medical attention if any discomfort continues.

Ingestion

Unlikely with ingestion.

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

Contact with rapidly expanding gas may cause frostbite.
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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Not applicable. The product is a fire extinguisher.

5.2. Special hazards arising from the substance or mixture

In case of fire, high pressure may build up causing the packaging to explode. Not flammable.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Due to the risk of explosion, any extinguishing must be executed from a good distance. Protective measures should be taken regarding other material at the site of the fire. If the gas cylinder cannot be removed, cool it with water as long as the fire persists and then at least 10 minutes. Cool closed containers that were exposed to fire with water.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe the product. Avoid contact with skin, eyes and clothes.
Ventilate area.

6.2. Environmental precautions

Avoid discharges into drains, onto the ground and in aquatic environments. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Evacuate area. Ventilate the gas. Let the gas from the leaking gas cylinders evaporate outdoors.

6.4. Reference to other sections

For personal protection see section 8 and for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

Keep this product away from food and out of reach of children and pets.
Avoid contact with skin and eyes.

Check pipes and shut-off valves regularly for gas leakages. Store this product separately from food items and keep it out of the reach of children and pets.

General hygiene

When using, do not eat, drink or smoke. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store cool and dry in well-sealed packaging. Protect from direct sunlight. Pressurised container: Must not be exposed to temperatures above 50°C.

7.3. Specific end use(s)

See section 1.2.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits

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Long-term Exposure Limit (LTEL) values

9000 mg/m³

5000 ppm

OELs - Occupational Exposure Limits - 2nd list.

European Union.

National occupational exposure limits

Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m ³	Short-term exposure limit ppm / mg/m ³	Source	Remark	Year
Carbon dioxide	124-38-9 -	5000 9150	15000 27400	EH40/2005	-	2020

8.2. Exposure controls

Appropriate engineering controls

Maintenance and service of personal protective equipment shall be included in the works plan for internal supervision. All inspections and remedial measures shall be documented. Oxygen monitors should be used since suffocating gases may be released. 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.

Eye / face protection

Wear approved, tight fitting safety glasses where splashing is probable.

Hand protection

Release of gas can cause strong cold. Gloves protecting against cold is recommended. 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.

Other skin protection

Suitable protective suit.

Respiratory protection

Self-contained breathing apparatus may be required.

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.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Gas

Colour

Colourless

Odour

Odorless

Melting point / freezing point

-78.5 °C

Boiling point or initial boiling point and boiling range

-56.6 °C

Flammability

No data available

Lower and upper explosion limit

No data available

Flash point

No data available

Auto-ignition temperature

No data available

Decomposition temperature

No data available

pH

No data available

Kinematic viscosity

No data available

Solubility

Water-soluble

Partition coefficient n-octanol/water

0.83

Vapour pressure

5.73 MPa

Density and/or relative density

0.82

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Relative density

Not applicable

Relative vapour density

1.52 Air = 1

Particle characteristics

Not applicable.

9.2. Other information

No further information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions are known under normal use.

10.4. Conditions to avoid

Protect from heat and direct sunlight.

10.5. Incompatible materials

None known.

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

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

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Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Can cause frostbite.

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

11.2. Information on other hazards

Endocrine disrupting properties

The substance is not considered to have endocrine disrupting properties.

Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Not classified as dangerous for the environment.

12.2. Persistence and degradability

Decay/transformation

Criteria for the biological degradation is not applicable to this inorganic material.

12.3. Bioaccumulative potential

Not applicable.

12.4. Mobility in soil

Mobility

Not applicable.

12.5. Results of PBT and vPvB assessment

The product does not meet the PBT and vPvB criteria of REACH regulation, Annex XIII.

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12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to humans.

12.7. Other adverse effects

Other adverse effects

Large emissions into the air, in combination with sunlight, can create ground-level ozone and may result in damage to vegetation, as well as respiratory difficulties for humans and animals. The product contains greenhouse gases not included in 842/2006/EC. Release of large quantities may add to the greenhouse effect.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Pressurized can: The container must not be heated or disposed as conventional waste. May be released into the atmosphere in well ventilated areas. Must not be released in areas where gases can accumulate.

Any disposal practice must be in compliance with all local and national laws and regulations.

Waste code	Waste description
16 05 05	gases in pressure containers other than those mentioned in 16 05 04

Please note - an asterisk (*) next to a code denotes that it is HAZARDOUS WASTE.

Other

The waste code is a recommendation. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

14.1. UN number

1013

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

CARBON DIOXIDE

IMDG proper shipping name

CARBON DIOXIDE

IATA proper shipping name

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14.3. Transport hazard class(es)

Label

2.2

ADR/RID/ADN



2.2

IMDG



2.2

IATA



Non-Flammable Gas

ADR / RID Class

2

ADR / RID Classification code

2A

ADR / RID hazard identification number

20

IMDG Class

2.2

IATA Class

2.2

ADN Class

2

ADN Class Code

2A

14.4. Packing group

Not applicable

14.5. Environmental hazards

No.

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IMDG Marine Pollutant

No.

14.6. Special precautions for user

Tunnel restriction code C/E

Transport category 3

IMDG EmS

F-C, S-V

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

Other

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres (ADR 1.1.3.6)

Stowage category A (IMDG)

Emergency Schedule (EmS) for FIRE (IMDG) F-C

Emergency Schedule (EmS) for SPILLAGE (IMDG) S-V

SECTION 15: Regulatory information

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

EU regulations

Contains no substances from the candidate list REACH.

Contains no substances subject to restrictions according to Annex XVII of REACH.

Contains no substances listed in Annex XIV of REACH.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (CLP).

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road.

National regulations

Local laws and regulations should be carefully observed.

EH40/2005 Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been performed.

SECTION 16: Other information

Abbreviations

PBT: Persistent, Bioaccumulative and Toxic.

vPvB: very Persistent and very Bioaccumulative.

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References to key literature and data sources

Information also retrieved from the supplier's safety data sheet. Date: 2021-06-01.

Phrase meaning

Press. Gas - Gases under pressure, Liquefied gas
H280 Contains gas under pressure; may explode if heated.