

SAFETY DATA SHEET

In accordance with 1907/2006 annex II 2015/830 and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Issued 2021-06-01
Version number 1.0



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

1.1. Product identifier

Trade name	Koldioxid
CAS No	124-38-9
EC No	204-696-9
Article number	i40376

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

Identified uses	Fire extinguishing agents
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1.3. Details of the supplier of the safety data sheet

Company	Presto Brandsäkerhet AB Värmbolsvägen 2, Box 315 64123 KATRINEHOLM Sweden
Telephone	+46 (0)10-45 20 000
E-mail	info@presto.se

1.4. Emergency telephone number

Acute cases: Call 112, request poison information.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Press. Gas (Comp.), H280
(See section 16)

2.2. Label elements

Hazard pictogram



Signal word	Warning
Hazard statement	
H280	Contains gas under pressure; may explode if heated
Precautionary statement	
P410+P403	Protect from sunlight. Store in a well-ventilated place

2.3. Other hazards

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

Constituent	Classification	Concentration
CARBON DIOXIDE		
CAS No: 124-38-9 EC No: 204-696-9	Press. Gas (Comp.); H280	≤100 %

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.

Use breathing apparatus when rescuing exposed persons.

Put the person in the three-quarters prone recovery position if he or she is unconscious or groggy.

Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.

Upon breathing in

Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact

Remove contact lenses immediately if possible.

Flush immediately with luke-warm water for 15 - 20 minutes with wide-open eyes. If symptoms persist, seek medical advice.

Upon 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.

Upon ingestion

Swallowing is unlikely.

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.

SECTION 5: Fire-fighting measures

5.1. 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 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not inhale the gas.

Use recommended safety equipment, see section 8.

Prevent from entering sewers, basements and pits, or any place where gas accumulation could be dangerous.

Keep unauthorized and unprotected people at a safe distance.

Use breathing apparatus when oxygen levels are low or unknown.

6.2. Environmental precautions

Avoid emissions into soil, water or air.

At amounts considered in this case, the product may be released into the natural environment without serious environmental consequences. Large emissions should however be reported to the emergency services and the Environment Agency.

6.3. Methods and material for containment and cleaning up

Evacuate the area and ventilate the gas.

Let the gas from the leaking gas cylinders evaporate outdoors.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not eat, drink or smoke in premises where this product is handled.

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.

Use recommended safety equipment, see section 8.

Implement appropriate engineering controls if necessary, see Section 8.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.

This product should be stored well out of reach of young children and kept safely apart from products intended for consumption.

Store at maximum 50 °C.

Store in a well-ventilated space.

Do not store in direct sunlight.

7.3. Specific end uses

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

CARBON DIOXIDE

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 5000 ppm / 9150 mg/m³

Short term exposure limit (STEL) 15000 ppm / 27400 mg/m³

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

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

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

Skin 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.

Respiratory protection

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.

8.2.3. Environmental exposure controls

For limitation of environmental exposure, see Section 12.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance	Form: Compressed gas. Colour: colourless.
b) Odour	scentless
c) Odour threshold	Not indicated
d) pH	Not applicable
e) Melting point/freezing point	-78.5 °C
f) Initial boiling point and boiling range	-56.6 °C
g) Flash point	Not applicable
h) Evaporation rate	Not applicable
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Not applicable
k) Vapour pressure	5.73 MPa
l) Vapour density	1.52 Air = 1
m) Relative density	0.820
n) Solubility	Solubility in water: Completely soluble
o) Partition coefficient: n-octanol/water	CARBON DIOXIDE: Log Kow 0.83
p) Auto-ignition temperature	Not applicable
q) Decomposition temperature	Not applicable
r) Viscosity	Not applicable
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

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

Note that in case of inhalation of large quantities, there is risk of suffocation due to lack of oxygen.

Risk of frostbites.

Acute toxicity

The criteria for classification cannot be considered fulfilled based on available data.

Skin corrosion/irritation

Contact with compressed gas may cause frostbites.

The criteria for classification cannot be considered fulfilled based on available data.

Serious eye damage/irritation

Contact with compressed gas may cause frostbites.

The criteria for classification cannot be considered fulfilled based on available data.

Respiratory or skin sensitisation

The criteria for classification cannot be considered fulfilled based on available data.

Germ cell mutagenicity

The criteria for classification cannot be considered fulfilled based on available data.

Carcinogenicity

The criteria for classification cannot be considered fulfilled based on available data.

Reproductive toxicity

The criteria for classification cannot be considered fulfilled based on available data.

STOT-single exposure

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

The criteria for classification cannot be considered fulfilled based on available data.

STOT-repeated exposure

The criteria for classification cannot be considered fulfilled based on available data.

Aspiration hazard

The criteria for classification cannot be considered fulfilled based on available data.

SECTION 12: Ecological information

12.1. Toxicity

No ecological damage is known or expected in the event of normal use.

12.2. Persistence and degradability

The methods used to test biodegradability is not applicable on inorganic compounds.

12.3. Bioaccumulative potential

Not applicable.

12.4. Mobility in soil

Not applicable.

12.5. Results of PBT and vPvB assessment

This substance is not a PBT or a vPvB.

12.6. 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

Waste handling of the product

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.

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 05 Gases in pressure containers other than those mentioned in 16 05 04

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

1013

14.2. UN proper shipping name

CARBON DIOXIDE

14.3. Transport hazard class(es)

Class

2: Gases

Classification code (ADR/RID)

2A: Liquefied gas: asphyxiant

Subsidiary risk (IMDG)

No subsidiary risk according to IMDG

Labels



14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: C/E

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

14.8 Other transport information

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

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

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 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: C/E; Transport in tanks: Passage not permitted through tunnels of category C, D and E. Other transport: Passage not permitted through tunnels of category E

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

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 2021-06-01.

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

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|------------|--|
| 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 |
| 2015/830 | COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) |
| 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 |

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

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

This product can cause injuries if not used properly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

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