

**Safety Data Sheet**

according to UK REACH Regulation

CO₂-Druckgasflasche

Revision date: 08.11.2024

Product code: CO₂-Druckgasflasche

Page 1 of 9

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**CO₂-Druckgasflasche**EAN**

4001942080118

4001942080316

Further trade names

CARBON DIOXIDE

CO₂-Füllung

Substance name: carbon dioxide

CAS No: 124-38-9

EC No: 204-696-9

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

Gas cylinder for adjustment of water parameters in aquariums and ponds.

The product is intended for consumer use.

The product is intended for professional use.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name: sera Werke Heimtierbedarf

J. Ravnak GmbH & Co. KG

Street: Borsigstraße 49

Place: D-52525 Heinsberg

Post-office box: 1466

D-52518 Heinsberg

Telephone: +49 (0)2452 91260

Telefax: +49 (0)2452 5922

E-mail: info@sera.de

Contact person: Dr. Matthias Dahm

E-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

Supplier

Company name: sera GmbH

Street: Borsigstr. 49

Place: D-52525 Heinsberg

Post-office box: 1466

D-52518 Heinsberg

Telephone: +49 (0)2452 91260

Telefax: +49 (0)2452 5922

E-mail: info@sera.de

Contact person: Dr. Matthias Dahm

E-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

1.4. Emergency telephone

+49 (0)2452 91260 (Only available during office hours.)

number:

+49 (0)2452 9126555

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Safety Data Sheet

according to UK REACH Regulation

CO2-Druckgasflasche

Revision date: 08.11.2024

Product code: CO2-Druckgasflasche

Page 2 of 9

GB CLP Regulation

Liquefied gas; H280

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word:

Warning

Pictograms:



Hazard statements

H280

Contains gas under pressure; may explode if heated.

Precautionary statements

P102

Keep out of reach of children.

P103

Read carefully and follow all instructions.

P410+P403

Protect from sunlight. Store in a well-ventilated place.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Vapours are heavier than air and may spread along floors.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

Liquefied gas (Carbon dioxide (CO2))

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
124-38-9	carbon dioxide			100 %
	204-696-9			
	Liquefied gas; H280			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Danger of suffocation: High concentrations of gas can create an oxygen-deficient environment.

After inhalation

Asphyxiant in high concentrations.

Remove casualty to fresh air and keep warm and at rest. In the case of bluish discoloration (lips, earlobes, finger nails) give oxygen as soon as possible. Immediately call a doctor.

Safety Data Sheet

according to UK REACH Regulation

CO₂-Druckgasflasche

Revision date: 08.11.2024

Product code: CO₂-Druckgasflasche

Page 3 of 9

After contact with skin

Rapid evaporation of the liquid may cause frostbite.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

No hazards which require special first aid measures

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

Unconsciousness. Asphyxiant in high concentrations. Rapid evaporation of the liquid may cause frostbite.

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**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixtureNon-flammable. The product itself does not burn. Pressurised container: May burst if heated. In case of fire may be liberated: Carbon dioxide (CO₂).**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

The product itself does not burn.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Evacuate area. Ensure adequate ventilation, especially in confined areas. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

For non-emergency personnel

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

For emergency responders

Use suitable breathing apparatus.

6.2. Environmental precautions

Prevent further leakage or spillage.

6.3. Methods and material for containment and cleaning up**For containment**

Provide adequate ventilation.

For cleaning up

Leave to vapourize.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

Safety Data Sheet

according to UK REACH Regulation

CO2-Druckgasflasche

Revision date: 08.11.2024

Product code: CO2-Druckgasflasche

Page 4 of 9

7.1. Precautions for safe handling**Advice on safe handling**

Observe instructions for use. Provide adequate ventilation. Do not breathe gas.

Advice on protection against fire and explosion

Pressurised container: May burst if heated.

Advice on general occupational hygiene

not applicable

Further information on handling

Use only in well-ventilated areas. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Protect pressurised gas bottles against overturning. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Hints on joint storage

Keep away from combustible material.

Further information on storage conditions

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

7.3. Specific end use(s)

Gas cylinder for adjustment of water parameters in aquariums and ponds.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
124-38-9	Carbon dioxide	5000	9150		TWA (8 h)	WEL
		15000	27400		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear eye protection/face protection. Suitable eye protection: goggles.

Hand protection

Hand protection is not required.

Skin protection

Body protection: not required.

Respiratory protection

Usually no personal respirative protection necessary.

Thermal hazards

Pressurised container: May burst if heated.

Environmental exposure controls

No special environmental measures are necessary.

CO2-Druckgasflasche

Revision date: 08.11.2024

Product code: CO2-Druckgasflasche

Page 5 of 9

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	compressed liquefied gas
Colour:	colourless
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	-56,6 °C
Boiling point or initial boiling point and boiling range:	-78,5 °C
Flammability:	not applicable Non-flammable.
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Flash point:	not applicable
Auto-ignition temperature:	does not ignite
Decomposition temperature:	not determined
pH-Value:	3,2-3,7
Viscosity / kinematic:	not determined
Water solubility: (at 25 °C)	2,9 g/l
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	0,83
Vapour pressure: (at 20 °C)	5730 hPa
Vapour pressure:	not determined
Density:	not determined
Relative density (at -56,6 °C):	1,512
Bulk density:	not applicable
Relative vapour density: (at 21 °C)	1,522
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No ignition, explosion, self-heating or visible decomposition.

Pressurised container: May burst if heated.

Sustaining combustion:

Not sustaining combustion

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

not applicable

Other safety characteristics

Evaporation rate:

not determined

Solvent separation test:

not applicable

Sublimation point:

-78,5 °C

Softening point:

not applicable

Pour point:

not applicable

Viscosity / dynamic:

0,07 mPa·s

(at 20 °C)

Safety Data Sheet

according to UK REACH Regulation

CO₂-Druckgasflasche

Revision date: 08.11.2024

Product code: CO₂-Druckgasflasche

Page 6 of 9

Flow time:

not applicable

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Avoid high temperatures or direct sunlight. Closed containers may burst when pressure and temperature rise.

10.5. Incompatible materials

none

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

Effects of breathing high concentrations of vapour may include:

Concentration >5%: Dyspnoea, Dizziness, Disorientation, Headache, Spasms, Unconsciousness.

Concentration >8%: Unconsciousness, suffocation.

Acute toxicity

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

Concentration >20%: May be fatal if inhaled..

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Information on likely routes of exposure

Inhalation, Dermal, Eye contact

Specific effects in experiment on an animal

No data available.

Additional information on tests

No data available.

Practical experience

High concentration of vapours may induce unconsciousness.

Safety Data Sheet

according to UK REACH Regulation

CO2-Druckgasflasche

Revision date: 08.11.2024

Product code: CO2-Druckgasflasche

Page 7 of 9

11.2. Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

Further information

Health injuries are not known or expected under normal use.

SECTION 12: Ecological information**12.1. Toxicity**

At normal temperatures a very volatile or gaseous product, which can easily escape into the atmosphere.

Global warming potential (GWP).

12.2. Persistence and degradability

not applicable

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
124-38-9	carbon dioxide	0,83

12.4. Mobility in soil

At normal temperatures a very volatile or gaseous product, which can easily escape into the atmosphere.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of UK REACH.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160505 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers other than those mentioned in 16 05 04

List of Wastes Code - used product

160505 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers other than those mentioned in 16 05 04

List of Wastes Code - contaminated packaging

160116 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); tanks for liquefied gas

Contaminated packaging

Completely emptied packages can be recycled. If recycling is not practicable, dispose of in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

SECTION 14: Transport information**Land transport (ADR/RID)**

Safety Data Sheet

according to UK REACH Regulation

CO2-Druckgasflasche

Revision date: 08.11.2024

Product code: CO2-Druckgasflasche

Page 8 of 9

14.1. UN number or ID number:	UN 1013
14.2. UN proper shipping name:	CARBON DIOXIDE
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2
Classification code:	2A
Special Provisions:	378 392 584 653 662
Limited quantity:	120 mL
Excepted quantity:	E1
Transport category:	3
Hazard No:	20
Tunnel restriction code:	C/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1013
14.2. UN proper shipping name:	CARBON DIOXIDE
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2
Classification code:	2A
Special Provisions:	378 392 584 653 662
Limited quantity:	120 mL
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1013
14.2. UN proper shipping name:	CARBON DIOXIDE
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2
Special Provisions:	378, 392
Limited quantity:	120 mL
Excepted quantity:	E1
EmS:	F-C, S-V

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1013
14.2. UN proper shipping name:	CARBON DIOXIDE
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2
Special Provisions:	A202
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E1
IATA-packing instructions - Passenger:	200
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	200
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Provide adequate ventilation.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Safety Data Sheet

according to UK REACH Regulation

CO2-Druckgasflasche

Revision date: 08.11.2024

Product code: CO2-Druckgasflasche

Page 9 of 9

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**Information according to Directive
2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

National regulatory information

Water hazard class (D):

- - non-hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Abbreviations and acronyms**

Liquefied gas

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Key literature references and sources for data

Safety Data Sheet, ECHA

Relevant H and EUH statements (number and full text)

H280 Contains gas under pressure; may explode if heated.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The receiver of our product is singularly responsible for adhering to existing laws and regulations.