



**BERNHARDT
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Safety data sheet

according to 1907/2006/EC

Document-No. UN2037-SDS, Revision: 01, 02.05.2023

1 IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Identification of the substance

non-refillable Gas Cylinder (Carbone Dioxide)

CAS Number: 124-38-9

EC number: 204-696-9

1.2 Use of the substance

No further relevant information available.

Application of the substance / the mixture

- Purge gas, Inerting gas
- Laboratory use
- Food additive
- Thinner, Diluent

1.3 Company identification

BERNHARDT APPARATEBAU

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Bredhornweg 39

25488 Holm/Germany

Phone: +49 4103 125-0

info@secumar.com

www.secumar.com

1.4 Emergency telephone

During office hours (7.45 am to 4.30 pm)

Tel: +49 4103 125-0



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2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



gas cylinder

Press. Gas (Comp.) H280 Contains gas under pressure; may explode if heated.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS04

Signal word

Warning

Hazard statements

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 carefully and follow all instructions.

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

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 COMPOSITION/INFORMATION ON INGREDIENTS

CAS No. Description

124-38-9 carbon dioxide

Identification number(s)

EC number:

204-696-9



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4 FIRST AID MEASURES

4.1 Description of first aid measures

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 FIRST AID MEASURES

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Not required.

6.2 Environmental precautions

No special measures required.

6.3 Methods and material for containment and cleaning up

No special measures required.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.



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7 HANDLING AND STORAGE

7.1 Handling

No special precautions are necessary if used correctly.

Information about fire - and explosion protection: No special measures required.

7.2 Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

None.

Storage class (TRGS):

2 A

7.3 Specific use(s)

No further relevant information available.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Specific use(s)

Additional information about design of technical facilities:

No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:

124-38-9 carbon dioxide

WEL Short-term value: 27400 mg/m³, 15000 ppm

Long-term value: 9150 mg/m³, 5000 ppm

Additional information:

The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Wash hands before breaks and at the end of work.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.



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Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Not required.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Appearance:

Form: Liquefied gas

Colour: Colourless

Odour:

Undistinguishable.

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition

Melting point/freezing point: -56.6 °C

Initial boiling point and boiling range: -78.5 °C

Flash point:

Not applicable.

Flammability (solid, gas):

Not determined.

Decomposition temperature:

Not determined.

Auto-ignition temperature:

Not determined.

Explosive properties:

Not determined.

Explosion limits:

Lower: Not determined.

Upper: Not determined.



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Vapour pressure at 20 °C:

57,300 hPa

Density at 20 °C:

0.00197 g/cm³

Relative density

Not determined.

Vapour density

Not determined.

Evaporation rate

Not applicable.

Solubility in / Miscibility with water at 20 °C:

2000 g/l

Partition coefficient: n-octanol/water:

Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Solids content:

0.0 %

9.2 Important health, safety and environmental information

9.3 Other information

No further relevant information available.

10 STABILITY AND REACTIVITY

Reactivity

No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Possibility of hazardous reactions

No dangerous reactions known.

10.1 Other information

No further relevant information available.

10.2 Materials to avoid

No further relevant information available.



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10.3 Hazardous decomposition products

No dangerous decomposition products known.

11 STABILITY AND REACTIVITY

Acute toxicity

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

Primary irritant effect:

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.

Additional toxicological information:

CMR effects (carcinogenicity, mutagenicity and toxicity 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.

12 ECOLOGICAL INFORMATION

12.1 Ecotoxicity

No further relevant information available.

12.2 Mobility

Mobility in soil

No further relevant information available.



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Additional ecological information:

General notes:

Not hazardous for water.

12.3 Persistence and degradability

No further relevant information available.

12.4 Bioaccumulative potential

No further relevant information available.

12.5 Results of PBT assessment

PBT:

Not applicable.

vPvB:

Not applicable.

12.6 Other adverse effects

No further relevant information available.

13 ECOLOGICAL INFORMATION

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation:

Disposal must be made according to official regulations.

Recommended cleansing agents:

Water, if necessary together with cleansing agents.

14 TRANSPORT INFORMATION

14.1 UN-Number

ADR, IMDG, IATA UN2037

14.2 UN proper shipping name

ADR 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

IMDG, IATA RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)



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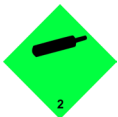
14.3 Transport hazard class(es)

ADR



Class 2.5A Gases.
Label 2.2

IMDG, IATA



Class 2 Gases.
Label 2.2

14.4 Packing group

ADR, IMDG, IATA

not regulated

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Warning: Gases

Packaging instruction

P003

PP 17

SV 191, 303, 344

Hazard identification number (Kemler code):

-

EMS Number:

F-D,S-U

Stowage Category

B

Stowage Code

SW2 Clear of living quarters.

14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)

1L



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Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

Transport category

3

Tunnel restriction code

E

IMDG

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

UN "Model Regulation":

UN 2037 RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES), 2.2

15 REGULATORY INFORMATION

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I

Substance is not listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16 REGULATORY INFORMATION

Disclaimer

This safety data sheet contains only safety relevant information. The information is based on the state of our knowledge at the time of revision, however, it does not constitute a guarantee of product properties, product information or product specifications and does not establish a contractual legal relationship. This document is only valid in its unchanged form. In the event of changes by third parties, the exhibitor accepts no responsibility for form and content or for any damages or claims arising from such changes. The information is not transferable to other products. If the product named in this safety data sheet is mixed, blended or processed with other materials or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise. The data sheet does not release the user from the obligation to ensure that he acts in accordance with all regulations in connection with his activity.

Department issuing SDS:

Environmental Protection Department

Contact:

MSDS authorized Person

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the



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International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Press. Gas (Comp.): Gases under pressure – Compressed gas