

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Carbon Dioxide Gas
- **Article number:** C1385
- **CAS Number:**  
124-38-9
- **EC number:**  
204-696-9
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS04 Gas cylinder

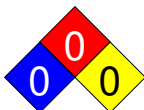
Gases under Pressure - Liquefied gas H280 Contains gas under pressure; may explode if heated.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS04

- **Signal word** Warning
- **Hazard statements**  
Contains gas under pressure; may explode if heated.
- **Precautionary statements**  
Protect from sunlight. Store in a well-ventilated place.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

Trade name: Carbon Dioxide Gas

(Contd. of page 1)

## · HMIS-ratings (scale 0 - 4)

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
CAS: 124-38-9 Carbon Dioxide Gas
- **Identification number(s)**
- **EC number:** 204-696-9

## 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **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.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** No special measures required.
- **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.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 54000 mg/m<sup>3</sup>
- **PAC-2:** 72000 mg/m<sup>3</sup>

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

Trade name: Carbon Dioxide Gas

(Contd. of page 2)

· PAC-3: 90000 mg/m<sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· <b>Components with limit values that require monitoring at the workplace:</b>
---

<b>CAS: 124-38-9 Carbon Dioxide Gas</b>
---

PEL	Long-term value: 9000 mg/m <sup>3</sup> , 5000 ppm
REL	Short-term value: 54,000 mg/m <sup>3</sup> , 30,000 ppm Long-term value: 9000 mg/m <sup>3</sup> , 5000 ppm
TLV	Short-term value: 30,000 ppm Long-term value: 5000 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **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.
- **Body protection:** Protective work clothing

US  
(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

Trade name: Carbon Dioxide Gas

(Contd. of page 3)

## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
Form:	Gaseous
Color:	Colorless
· Odor:	Odorless
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· <b>Change in condition</b>	
Melting point/Melting range:	-78.5 °C (-109.3 °F)
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not determined.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Not determined.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	57,249 hPa (42.949 mm Hg)
· Density at 20 °C (68 °F):	0.00197 g/cm <sup>3</sup> (0.01644 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water at 20 °C (68 °F):	2000 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 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.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

US

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

Trade name: Carbon Dioxide Gas

(Contd. of page 4)

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |                                  |                |
|----------------------------------|----------------|
| · <b>UN-Number</b>               |                |
| · <b>DOT, IMDG, IATA</b>         | UN1013         |
| · <b>UN proper shipping name</b> |                |
| · <b>DOT</b>                     | Carbon dioxide |
| · <b>IMDG, IATA</b>              | CARBON DIOXIDE |

(Contd. on page 6)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

Trade name: Carbon Dioxide Gas

(Contd. of page 5)

· Transport hazard class(es)

· DOT



· Class

2 Gases

· Label

2

· IMDG, IATA



· Class

2 Gases

· Label

2

· Packing group

· DOT, IMDG, IATA

Not regulated

· Environmental hazards:

· Marine pollutant:

No

· Special precautions for user

Warning: Gases

· Hazard identification number (Kemler code): 20

· EMS Number:

F-C,S-V

· Stowage Category

A

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

Not applicable.

· Transport/Additional information:

· DOT

· Quantity limitations

On passenger aircraft/rail: 75 kg

On cargo aircraft only: 150 kg

· IMDG

· Limited quantities (LQ)

120 ml

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 1013 CARBON DIOXIDE, 2.2

## 15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture  
No further relevant information available.

· Sara

· Section 355 (extremely hazardous substances): Substance is not listed.

· Section 313 (Specific toxic chemical listings): Substance is not listed.

· TSCA (Toxic Substances Control Act): ACTIVE

· Hazardous Air Pollutants Substance is not listed.

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 07/03/2024

Reviewed on 07/03/2024

**Trade name: Carbon Dioxide Gas**

(Contd. of page 6)

- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS04

- **Signal word** Warning
- **Hazard statements**  
Contains gas under pressure; may explode if heated.
- **Precautionary statements**  
Protect from sunlight. Store in a well-ventilated place.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Environment protection department.
- **Contact:**  
Date of Preparation / Last Revision:
- **Date of preparation / last revision**  
Revision 1.2 07/03/2024: Reviewed SDS for accuracy. MH/STN  
Creation date for SDS 10-15-2015. STN  
07/03/2024 / 1.1
- **Abbreviations and acronyms:**  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Gases under Pressure - Liquefied gas: Gases under pressure – Liquefied gas
- **\* Data compared to the previous version altered.**