

Safety data sheet

CO2 System Nano

Version 1.0

Effective date: 27-01-2023



SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier.

Trade name: CO2 System Nano.

CAS No.: 124-38-9

EC No.: 204-696-9

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

Product use: CO2 System.

1.3 Details of the Supplier of the safety data sheet:

Company: Tropica Aquarium Plants A/S
Mejlbyvej 200
DK-8250 Egaa
Denmark
Tlf. +45 86 22 05 66
Fax +45 86 22 84 66

Contact: tropica@tropica.dk

1.4 Emergency telephone number:

Use your local emergency number.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture to CLP No 1272/2008/GB CLP.

Press. Gas; H280.

2.2 Label elements CLP No. 1272/2008/GB CLP.

Hazard pictograms:



Signal word:

Warning

Hazard statements:

H280 Contains gas under pressure; may explode if heated.

Precautionary statements:

General:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

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Prevention:

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Response:

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Storage:

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

Disposal:

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Additional information:

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2.3 Other hazards:

Contains no PBT or vPvB substances according to REACH No 1907/2006.

This mixture does not contain substances with endocrine disrupting properties in accordance with the criteria laid down in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

CAS/EC No	REACH No	Name	Content %	Classification CLP
124-38-9 / 204-696-9	Excepted	Carbon dioxide	100	Press. Gas.; H280.

See full text of H-phrases in section 16. Occupational limits are listed in section 8, if these are available.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

General information:

In the case of accident: Contact a doctor or casualty department – bring this safety data sheet.

Inhalation:

Seek fresh air. Seek medical advice in case of persistent discomfort.

Skin contact:

Seek medical advice immediately if symptoms indicate that the gas has been absorbed through the skin. On frostbite: rinse with plenty of lukewarm water (max 37°C). Do not remove clothes until thawed. Seek medical advice.

Eye contact:

Flush immediately with water (preferably using eye wash equipment) for at least 5 minutes. Open eye wide. Remove any contact lenses. Seek medical advice in case of frostbite.

Ingestion:

Not a likely exposure route.

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

The gas may displace atmospheric air, thereby causing risk of suffocation. Direct contact may cause frostbite. The skin becomes numb and white. Pains, reddening and wounds follow. Splashes of gas in the eyes may cause frostbite.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.
In case of shortness of breath, give oxygen.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Extinguish with powder, foam, carbon dioxide or water mist.

Unsuitable extinguishing media:

Do not use water stream, as it may spread the fire.

5.2 Special hazards arising from the substance or mixture:

Contains gas under pressure; may explode if heated.
Compressed air at high pressures may accelerate combustion of other materials.

5.3 Advice for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact. Containers close to fire should be removed immediately or cooled with water.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

See section on section 8 for information on personal protection.
Provide adequate ventilation.

6.2 Environmental precautions:

Avoid unnecessary release to the environment.

6.3 Methods and material for containment and cleaning up:

Evaporates to air.

6.4 Reference to other sections:

See section 8 for information on personal protection equipment.
See section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

See section on section 8 for information on personal protection.
Running water and eye wash equipment should be available. Wash hands before breaks, before using restroom facilities, and at the end of work. Make sure the room is well-ventilated. Make sure that all tubes and fittings are leak-tight. All fixtures, pipes, wires and fittings must be free of oil, grease and other oxidizing materials (e.g. solvents). Do not lift pressurized cylinders by the protective cap.

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7.2 Conditions for safe storage, including any incompatibilities:

The product should be stored safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc.

7.3 Specific end use(s):

This product should only be used for applications described in section 1.2

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters - Occupational exposure limits EH-40 (Great Britain):

CAS No:	Name:	Limits 8 h:	Limits 15 min.:	Ref./comments:
124-38-9	Carbon dioxide	5000 ppm 9150 mg/m ³	15000 ppm 27400 mg/m	EH40/-

DNEL / PNEC:

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8.2 Exposure controls.

Appropriate technical measures:

In case of release:

Airborne concentrations must be kept as low as possible. Use for example an exhaust system if the normal air flow in the work room is not sufficient.

General information / Hygiene measures:

Wash hands after use. Do not eat, drink or smoke in the work area.

Remove contaminated clothing and protective equipment before entering eating areas. Make sure that eyewash station is available

Personal protective equipment:

Only CE-marked personal protection equipment should be used.

Respiratory protection:

Not necessary.

Hand protection:

Wear gloves that protect against cold and pressure effects, e.g. strong leather gloves. The gloves must be loose enough to be shaken off easily.

Eye protection:

Normally not necessary.

Safety glasses are recommended when handling cylinders. EN 166.

Body protection:

Normal work clothing.

Measures to avoid environmental exposure:

No special precautions necessary.

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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:	None
Melting point/freezing point:	Sublimation temperature: -78.5°C Critical temperature: 30.9°C
Boiling point:	-78,55°C
Flammability:	Not relevant/no data
Lower and upper explosion limit:	Not relevant/no data
Flash point:	Not relevant/no data
Auto-ignition temperature:	Not relevant/no data
Decomposition temperature:	Not relevant/no data
pH:	Not relevant/no data
Kinematic viscosity:	Not relevant/no data
Solubility:	Not relevant/no data
Partition coefficient n-octanol/water:	Not relevant/no data
Vapour pressure:	830 psig
Density and/or relative density:	Gas: 1.82 kg/m ³
Relative vapour density:	1.53 (air=1)
Particle characteristics:	Not relevant/no data

9.2 Other information:

Molar mass: 44,01 g/mol

Molecular formula: CO₂

Specific volume: 0.54 m³/kg

SECTION 10. STABILITY AND REACTIVITY

- 10.1 Reactivity:** No dangerous reaction known under conditions of normal use.
- 10.2 Chemical stability:** Stable under the recommended storage conditions (see section 7)..
- 10.3 Possibility of hazardous reactions:** None known.
- 10.4 Conditions to avoid:** None known
- 10.5 Incompatible materials:** None known
- 10.6 Hazardous decomposition products:** None known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008/GB CLP.

Acute toxicity: Not classified.

Skin corrosion/irritation: Not classified.

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Serious eye damage/irritation: Not classified.

Respiratory or skin sensitization: Not classified.

Germ cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity - single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not classified.

11.2 Information on other hazards:

Endocrine disrupting properties:

The product/substance has no endocrine disrupting properties.

Additional information:

The gas may displace atmospheric air, thereby causing risk of suffocation. Direct contact may cause frostbite. The skin becomes numb and white. Pains, reddening and wounds follow. Splashes of gas in the eyes may cause frostbite.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: Not classified as hazardous to the environment.

12.2 Persistence and degradability: Not applicable to gases.

12.3 Bioaccumulative potential: Test data are not available.

12.4 Mobility in soil: Test data are not available.

12.5 Result of PBT and vPvB assessment: The product does not meet the criteria for PBT or vPvB.

12.6 Endocrine disrupting properties: The product/substance has no endocrine disrupting properties.

12.7 Other adverse effects: None known.

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SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Dispose in a safe manner in accordance with local/national regulations. The coding of a waste stream is based on the application of the product by the consumer – end-user.

Option:

EWC-code:

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

Packing:

Return cylinder to supplier. Otherwise according to package material.

SECTION 14. TRANSPORT INFORMATION

This product is classified as dangerous to transport.

LQ (limited quantity).

	ADR/RID	IMDG/IMO
14.1 UN number or ID number	1013	1013
14.2 UN proper shipping name	CARBON DIOXIDE	CARBON DIOXIDE
14.3 Transport hazard class(es)	2.2	2.2
14.4 Packing group	Not relevant	Not relevant
14.5 Environmental hazards - MP	No F-C, S-V	No F-C, S-V
Other informations	LQ: 120 ml. TUNNEL: C/E	LQ: 120 ml. TUNNEL: C/E

14.6 Special precautions for user:

Not relevant.

14.7 Maritime transport in bulk according to IMO instruments:

Not relevant.

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SECTION 15. REGULATORY INFORMATION

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

Sources: Chemicals (Hazard Information and Packaging for Supply) Regulations 2009. Control of Substances Hazardous to Health Regulations 2002 (as amended). Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. Regulation (EU) 2016/425 of 9 March 2016 on personal protective equipment. Hazardous Waste (England and Wales) Regulations 2005 (as amended). EC regulation 1907/2006 (REACH) Directive 2000/532/EC. Seveso directive: 96/82/EC. EC regulation No 2020/878. CLP regulation No 1272/2008. REACH regulation 1907/2006. GB CLP.

Additional information: -

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Full text of H-phrases as mentioned in section 3:

H280 Contains gas under pressure; may explode if heated.

Additional information:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Validated by:

SRS

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