SodaStream Carbon Dioxide cylinder.

Issue: 19
Issue date: January 2022

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

GHS Product identifier Product name Liquefied, non-flammable, non-toxic Carbon dioxide,

Trade name SodaStream gas cylinder

EC No (from EINECS): 204-696-9 CAS No: 124-38-9

Chemical formula CO_2

REACH Registration number:
Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.

Relevant identified uses of the substance and uses advised against
Relevant identified uses Carbonation of water in SodaStream machine.

Uses advised against Any other use.

Details of the supplier of the safety data sheet
Distribution in USA: SodaStream USA, Inc.
1140 Thomas Busch Memorial Hwy
Pennsauken Township, NJ 08110
USA
Tel. +1 856 755 3400
Fax. +1 856 667 7826

Emergency telephone number USA - Chemtrec 800-424-9300

Distribution in Canada: SodaStream Canada Ltd
325B Annagem Blvd
Mississauga, Ontario
L5T 3A7
Canada
Tel. + 1-877-436-5866
Fax. + 1-877-561-7598

Emergency telephone number Canada - CANUTEC 1-888-226-8832

SECTION 2: Hazards identification

GHS Classification of the substance
Classified as hazardous according to Globally Harmonized System of classification and labelling of chemicals (GHS),

Classification Gases under pressure (Liquefied gas), Simple asphyxiant.

Precautionary statement **L**iquefied gas. Contact with product may cause cold burns or frostbite.

Hazard Pictogram 

- Signal word Warning

- Hazard Statements

H280 - Contains gas under pressure; may explode when heated. The cylinder valve however contains a bursting disc designed to safely release the contents of the cylinder to atmosphere before the test pressure is reached, thus protecting the cylinder.
May displace oxygen and cause rapid suffocation

- Precautionary Statements

Precautionary Statement Storage

Protect from sunlight. Store in a well ventilated place.

Precautionary Statement Disposal

Return to supplier.

Other hazards

Simple asphyxiant in high concentrations. May displace oxygen and cause rapid suffocation

SECTION 3: Composition/information on ingredients.

Substance / Mixture: Substance.

Substances

Carbon dioxide, CO_2, greater than 99.9% pure.
CAS No: 124-38-9
EC No (from EINECS): 204-696-9
REACH Registration number:
Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.

Mixtures

Contains no other components or impurities which will influence the classification of the product.

SECTION 4: First aid measures.

Description of first aid measures

First Aid Inhalation: Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
First Aid Skin / Eye: In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance. Immediately flush eyes thoroughly with water for at least 15 minutes.
First Aid Ingestion: Ingestion is not considered a potential route of exposure.

Most important symptoms and effects, both acute and delayed

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Low concentrations of CO_2 cause increased respiration and headache.

Indication of any immediate medical attention and special treatment needed

Dizziness or drowsiness. Difficult or rapid breathing. Any signs of frostbite.

SECTION 5: Fire fighting measures.

Extinguishing media

Suitable extinguishing media

All known extinguishants can be used for the surrounding fire. Carbon dioxide is non-flammable but if heated the bursting discs may rupture to release all of

the contained CO_2.

Special hazards arising from the substance

Exposure to fire may cause containers to rupture/explode. Safety device releases all contents to atmosphere.

Hazardous combustion products None.

Advice for fire-fighters

Move container away or cool with water from a protected position.

Special protective equipment for fire-fighters

In confined space use self-contained breathing apparatus.

SECTION 6: Accidental release measures

Personal precautions

Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.

Environmental precautions

Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Methods for containment and cleaning up

Ventilate area.

Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

Precautions for safe handling

Do not allow back feed of water into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not throw cylinders or allow them to drop onto hard surfaces.

Conditions for safe storage.

Boxed cylinders may be stood upright, loose cylinders should be laid horizontally and prevented from rolling. Cylinders should preferably be stored in open or ground level ventilated areas. If in a small closed room, the doors should be marked with “WARNING. NO VENTILATION. OPEN WITH CAUTION” in letters not less than 25mm high.

CO_2 is a heavy gas and any leakage will gather on the lowest level and slowly fill up a closed room.

Store cylinders away from direct sunlight or other sources of heat.

Store in an ambient temperature below 122ºF / 50ºC

Specific end use(s)

Cylinders for use in SodaStream drinks making equipment. Should be used in accordance with the instructions for the drinksmaker.

Do not tamper with or remove the valve. Do not tamper with the cylinder.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limit value

Exposure Limit						
Component	Result	ACGIH	Canada Ontario	Canada Quebec	NIOSH	OSHA
Carbon Dioxide	STEL	30000 ppm STEL	30000 ppm STEL	30000 ppm STEL 54000 mg/m^3 STEV	30000 ppm STEL 54000 mg/m^3 STEL	Not established
	TWA	5000 ppm TWA	5000 ppm TWA	5000 ppm TWA 9000 mg/m^3 TWAEV	5000 ppm TWA 9000 mg/m^3 TWA	5000 ppm TWA 9000 mg/m^3 TWA

Exposure controls

Appropriate engineering controls Ensure adequate natural or forced ventilation.

Personal Protective Equipment Use a NIOSH/MSHA or European standard EN 149 approved respirator if exposure limits are exceeded or inadequate ventilation is apparent. Wear eye and feet protection. Wear leather or insulated neoprene gloves when handling cylinders.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

General information

Physical state at 20°C: Liquefied gas in a cylinder, gas when not pressurised.
Appearance/Colour: Colourless liquid or gas.
Odour: No odour warning properties. Some may detect a pungent odour and biting taste.
Odour threshold Not applicable
pH 3.7 as carbonic acid
Melting point: -70°F (-56,6 °C)
Boiling point: -109,3°F (-78,5 °C)
Sublimation point: -109,3°F (-78,5 °C)
Critical temperature: 86°F (30°)C
Flash point: Not applicable.
Flammability: Non flammable.
Evaporation rate High
Vapour Pressure 20°C: 57,3 bar
Relative density, gas: [air=1] 1,52
Relative density, liquid: [water=1] 0,82
Solubility in water: 2000 mg/l
Decomposition temperature Not available
Autoignition temperature: Not applicable.
Explosive properties: Not explosive
Oxidising properties: Not applicable.
Viscosity Not applicable

Other information Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

Hazardous decomposition products None

SECTION 10: Stability and reactivity

Reactivity Unreactive under normal conditions.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions
None

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Conditions to avoid None

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Incompatible materials Dusts of various metals such as magnesium, zirconium, titanium, aluminium, chromium and manganese are ignitable and explosive when suspended in carbon dioxide.

SECTION 11: Toxicological information

Information on toxicological effects

General Likely routes of exposure are inhalation and skin and eye contact. Ingestion is considered an unlikely route of exposure because under normal conditions carbon dioxide is encountered in gaseous form.

Inhalation. In high concentrations may cause rapid circulatory insufficiency. Symptoms are headache, nausea and vomiting, which may lead to unconsciousness.

Carbon Dioxide Concentration Inhaled	EFFECTS
1%	Breathing rate increases slightly.
2%	Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness.
3%	**Breathing increases to twice normal rate and becomes labored.** Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate.
4–5%	Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt.
5–10%	Characteristic sharp odor noticeable. **Very labored breathing, visual impairment,** headache, and ringing in the ears. **Judgment may be impaired, followed within minutes by loss of consciousness.**
10–100%	Unconsciousness occurs more rapidly above 10% level. **Prolonged exposure to high concentrations may eventually result in death from asphyxiation.**

Skin/eye contact. No harm expected from carbon dioxide gas.
Cold gas from a discharging cylinder, liquid or solid carbon dioxide (dry ice) may cause severe frostbite.

Effects of repeated exposure.
No harm expected from repeated exposure to gas.

Acute dose effects. LC_{Lo} = 90.000ppm, 5 minutes, human.

Carcinogenicity Carbon dioxide is not listed by NTP, OSHA or IARC.

SECTION 12: Ecological information

Toxicity When discharged in large quantities, CO_2 may contribute to the greenhouse effect. Carbon dioxide readily absorbs into water. Fish toxicity: 150000µg/L 48 days (mortality) Brown Trout.

Global Warming Potential GWP [CO_2 = 1] 1

Ozone-depletion Carbon dioxide is not an ozone-depleting chemical.

Persistence and degradability Not applicable

Mobility in soil Not applicable

Other adverse effects No adverse ecological effects are expected.

SECTION 13: Disposal considerations

Waste treatment methods

Do not discharge into any place where its accumulation could be dangerous. If necessary, vent to atmosphere in a well ventilated place. Discharge to atmosphere in large quantities should be avoided. Do not cut or incinerate cylinders.
Return cylinders to supplier.

SECTION 14: Transport information

Land transport

UN number UN 1013

Label code 49cfr172.101, TDG regulations, IMDG, IATA

2.2 Non-flammable, non-toxic gas

DOT-SP 20796 and TC TU 0715

UN proper shipping name	Carbon dioxide
Transport hazard class(es)	2.2
Packing group	not applicable
Environmental hazards	None

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Sea transport
IMO-IMDG

UN number	UN 1013
UN proper shipping name	Carbon dioxide
Transport hazard class(es)	Class 2.2 Label: 2.2
Packing group (Packing Instruction)	P200
Environmental hazards	None.

Special precautions for user

Emergency schedules	
Fire	F-C
Spillage	S-V

Air transport
IATA

UN number	UN 1013
UN proper shipping name	Carbon dioxide.
Transport hazard class(es)	Class: 2.2 Label: 2.2
Packing group (Packing Instruction)	200 (Passenger and cargo aircraft)
Environmental hazards	None

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Special precautions for user

Avoid transport on vehicles where the load space is not separated from the driver's compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured.
Ensure all cylinders are protected from sun/heat, are covered and secure.
Ensure adequate ventilation.
Ensure compliance with applicable regulations.

SECTION 15: Regulatory information

Cylinder design codes: 49cfr178.46; 178.69; 178.70; 178.71 (DOT-3AL-1800 and UN ISO 7866 cylinder specification)
CAN/CSA-B339-02 (TC-3ALM-124 cylinder specification)

15.1 Identification:

Approval # CA1999060006 for DOT-3AL-1800 and for UN ISO 7866 aluminium cylinders
DOT-SP 20796
Approval # TC 217 for TC-3ALM-124 aluminium cylinders.
Registration # M-9903 marked on each cylinder

National Regulations:
SodaStream/Soda-Club carbon dioxide cylinders conform to Department of Transportation (DOT) and Canadian Transport of Dangerous Goods Regulations where marked on the cylinders.

Chemical safety assessment
A CSA does not need to be carried out for this product. Exposure data is included elsewhere in this SDS. Usage instructions are supplied with each product.

SECTION 16: Other information

This is issue 19 of the safety Data Sheet dated January 2022. It replaces the previous issue 18 dated June 2021.

Ensure all national/local regulations are observed.
The hazard of asphyxiation is often overlooked and must be stressed during operator training. Ensure storage areas are ventilated. Contact with liquid CO_2 can cause cold burns/frostbite. Rapidly discharged cylinders can become very cold and protective gloves should be worn.
Do not breathe the gas.
High concentration levels of CO_2 discharged from single cylinders are unlikely to occur in other than extremely confined locations.

Store cylinders away from direct sunlight or other sources of heat. Store in an ambient temperature below 122ºF / 50ºC.
Store the cylinders securely in boxes to prevent them rolling or falling on warehouse personnel.
Do not throw or impact the cylinders.
Ensure packaging is kept dry.
Cylinders are heavy; care should be taken to lift the boxes correctly to avoid back injuries

Note: When using this document care should be taken, as the decimal sign and its position complies with rules for the structure and drafting of international standards, and is a comma on the line. As an example 2,000 is two (to three decimal places) and not two thousand, whilst 1.000 is one thousand and not one (to three decimal places).

Advice
While proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Details given in this document are believed to be correct at the time of going to press.

Further information
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