



SAFETY DATA SHEET

Carbon Dioxide in non-refillable gas cylinders

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First edition: March 2015

Last modified: April 2021

INA.SD.CO2, Issue 03

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

Product identifier

Trade name : Carbon Dioxide in non-refillable gas cylinders less than 118 ml (4 Fl oz.)
Safety data sheet no. :
Chemical description of gas : Carbon Dioxide
CAS-No.: 124-38-9
Chemical formula : CO₂
UN number : UN 1013
Usage : For various culinary and industrial applications
Perform risk assessment prior to use.
Company name : iSi North America Inc. Website: www.isi.com
175 Route 46 West E-mail: info@isinorthamerica.com
Fairfield, NJ 07004 Tel.: +1-973-227-2426
Emergency telephone number : Chemtrec Tel.: +1-800-424-9300

2 Hazards identification

Classification of the substance or mixture

Classification (GHS-US/GHS-CAN)

: Contains gas under pressure; may explode if heated H280
: Full text of H statements : see section 16

Label elements

GHS-US/GHS-CAN Labelling

• Hazard pictograms



• **Signal word** : Warning
• **Hazard statements** : H280 - Contains gas under pressure; may explode if heated
Precautionary statements: P410+P403 - Protect from sunlight. Store in a well-ventilated place

Other hazards

Other hazards : May cause asphyxiation in high concentrations.
Contact with solid CO₂ (dry ice) or liquid CO₂ may cause cold burns/ frost bite.



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3 Composition/information on ingredients

Substance/Preparation : Substance

Substance name	CAS no.	%
Carbon dioxide	124-38-9	100

Does not contain any other components or impurities which could affect the classification of this product.

4 First-aid measures

Inhalation	: Immediately remove victim to uncontaminated area. The victim should be made to wear respiratory equipment. Keep victim warm and rested. Call a doctor. Attempt artificial respiration if the victim stops breathing.
Contact with skin	: No specific first aid necessary for this route of exposure.
Contact with eye	: Flush eyes immediately with water for at least 15 minutes. Consult a doctor.
Ingestion	: Ingestion is not considered a possible method of exposure.

5 Fire-fighting measures

Specific risks	Cylinder may burst/explode if exposed to direct flame and thermal radiation by fire, respectively.
Hazardous combustion Products	None
Extinguishing media - Suitable extinguishing agent Specific methods	All known extinguishing media can be used. Move cylinder away from fire area, if this can be done without risk. If possible, attempt to stop gas release. Use fire fighting measures appropriate for the surrounding fire.
Special protective equipment for fire fighters	Standard protective clothing and equipment (Self-contained breathing Apparatus).

6 Accidental release measures

Personnel-related precautions	Evacuate area. Eliminate all ignition sources, if safe to do so. Provide adequate ventilation.
Environmental precautions	Attempt to stop gas release. Prevent from entering sewer systems, basements, work pits or any other areas where accumulation could be hazardous.
Cleaning up methods	Ventilate area

7 Handling and storage

Handling	: Do not use oil or grease. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. If in doubt, consult supplier. Do not smoke while handling product. Use only oxygen approved lubricants and sealants. Only experienced and properly instructed persons should handle gases under pressure. Ensure the complete gas system was (or is regularly) checked for leaks before use. Use only with equipment suitable for this product, its supply pressure, and
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temperature. If in doubt, contact supplier. The substance must be handled in accordance with good industrial hygiene and safety procedures.

Safe use of pressurized cylinder: Refer to supplier's handling instructions. Do not allow backfeed into cylinder. Do not subject cylinder to mechanical shocks which may cause damage to their integrity. Do not use cylinder as roller or support, or for any other purpose than to contain the gas as supplied. Never attempt to refill an empty cylinder. Never attempt to transfer gases from one cylinder to another. Emerging gas may cause the cylinder to freeze. Do not touch a discharging or recently discharged cylinder with bare hands. Never use direct flame or electrical heating devices to raise the pressure of a cylinder. Keep cylinder connections clean and free from contaminants, particularly from oil and water. Only use equipment suitable for this product and its pressure and temperature specified. If in doubt, contact supplier.

Storage

: Keep out of reach of children. Store cylinder in a well-ventilated place at less than 50°C. Store cylinder in a location free from risk of fire and away from sources of heat and ignition. Periodically check cylinder for general conditions and leakage. Do not store cylinder in conditions likely to encourage corrosion. Observe all regulations and local requirements regarding storage of gas cylinders.

8 Exposure controls/personal protection

Personal protection

: Ensure adequate ventilation.
Systems under pressure should be regularly checked from leakages. Wear eye protection with side shields. Wearing working gloves while handling gas cylinders. Wear safety shoes while handling gas cylinders.

Occupational exposure limits

: None

9 Physical and chemical characteristics

Physical state	: Gas
Color	: Colorless
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: -56.6 °C
Freezing point	: No data available
Boiling point	: -78.5 °C
Critical temperature	: 31 °C
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: Not applicable
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: 57.3
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Relative gas density	: 1.52

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Solubility	:	Water: 2000 mg/l
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available



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10 Stability and reactivity

Reactivity	: No additional information available
Chemical stability	: The product is stable at normal handling and storage conditions.
Possibility of hazardous reactions	: Will not occur.
Conditions to avoid	: None.
Incompatible materials	: None.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Toxicological information	: There are no toxic effects known of this product.
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12 Ecological information

Ecological effects information	: No ecological damages caused from this product.
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13 Disposable considerations

General	: Do not discharge into any place where its accumulation could be dangerous. Release into the atmosphere in a well-ventilated place. Avoid releasing large quantities into the atmosphere. Consult your supplier if you require advice.
Disposal methods	: Dispose of emptied cylinders only. Cylinders are made of recyclable steel and hence a valuable resource. Emptied cylinders should therefore always be recycled. Adhere to local waste regulations when disposing of emptied cylinders. Never dispose of cylinders in an uncontrolled manner (e.g. dumping at sea).

14 Transport information

In accordance with DOT	
Transport document description	: UN1013 Carbon dioxide, non-flammable compressed, 2.2
UN-No.(DOT)	: UN1013
Proper Shipping Name (DOT)	: Carbon dioxide
Class (DOT)	: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT)	: Disposable Cylinder Limited Quantity Exemption as per: Limited Quantity (49 CFR 173.306): Each cartridge < 4 fluid ounces (118 ml); No hazard labeling except by air, no specification packaging (cylinder), outer package < 66 pounds (30 Kg) gross.



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In accordance with TDG

UN-No. (TDG)

TDG Primary Hazard Classes

Transport document description

TDG Proper Shipping Name

Hazard labels (TDG)

: UN1013

: 2.2 - Class 2.2 - Non-Flammable, Non-Toxic Gas.

: UN1013 CARBON DIOXIDE, 2.2

: CARBON DIOXIDE

: 2.2 - Non-flammable compressed gas



TDG Special Provisions

: 148 - (1) Part 5 (Means of Containment) does not apply to radiation detectors that contain these dangerous goods in non-refillable pressure receptacles if (a) the working pressure in each receptacle is less than 5 000 KPa; (b) the capacity of each receptacle is less than 12 L; (c) each receptacle has a minimum burst pressure of (i) at least 3 times the working pressure, when the receptacle is fitted with a relief device, or (ii) at least 4 times the working pressure, when the receptacle is not fitted with a relief device; (d) each receptacle is manufactured from material that will not fragment upon rupture; (e) each detector is manufactured under a quality assurance program; ISO 9001:2008 is an example of a quality assurance program. (f) the detectors are transported in strong outer means of containment; and (g) a detector in its outer means of containment is capable of withstanding a 1.2 m drop test without breakage of the detector or rupture of the outer means of containment. (2) Part 5 (Means of Containment) does not apply to radiation detectors that contain these dangerous goods in non-refillable pressure receptacles and that are included in equipment, if (a) the conditions set out in paragraphs (1)(a) to (e) are met; and (b) the equipment is contained in a strong outer means of containment or the equipment affords the detectors with protection that is equivalent to that provided by a strong outer means of containment. (3) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to radiation



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detectors that contain these dangerous goods in non-refillable pressure receptacles, including detectors in radiation detection systems, if the detectors meet the requirements of subsection (1) or (2), as applicable, and the capacity of the receptacles that contain the detectors is less than 50 mL. SOR/2014-306 UN1006, UN1013, UN1046, UN1056, UN1065, UN1066, UN1956, UN2036 SOR/2014-306

Explosive Limit and Limited Quantity : 0.125 L

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Excepted quantities (TDG) : E1

15 Regulatory information

US Federal regulations

Carbon dioxide (124-38-9) : Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State regulations

Carbon dioxide (124-38-9) : U.S. - Massachusetts - Right To Know List
: U.S. - Minnesota - Hazardous Substance List
: U.S. - New Jersey - Right to Know Hazardous Substance List
: U.S. - Pennsylvania - RTK (Right to Know) List

Canada regulations

Carbon dioxide (124-38-9) : Listed on the Canadian DSL (Domestic Substances List)

16 Other information

Full text of H-phrases : H280 - Contains gas under pressure; may explode if heated

May cause asphyxiation in high concentrations.

Keep cylinder in a well-ventilated place.

Do not inhale the gas.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

DISCLAIMER OF LIABILITY

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