



Safety Data Sheet

This safety data sheet complies with the requirements of: 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)

Product name Carbon Dioxide

1. Identification

1.1. Product Identifier

Product name Carbon Dioxide

1.2. Other means of identification

Product code 028034

UN/ID no UN1013

Synonyms None

Chemical Family No information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use No information available

Uses advised against Consumer use

1.4. Details of the Supplier of the Safety Data Sheet

Company Name Tyco Fire Protection Products
One Stanton Street
Marinette, WI 54143-2542
Telephone: 715-735-7411

Contact point Product Stewardship at 1-715-735-7411

E-mail address psra@tycofp.com

1.5. Emergency Telephone Number

Emergency telephone CHEMTREC 800-424-9300 or 703-527-3887

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Gases Under Pressure

- Compressed Gas

Simple asphyxiants

- Yes

2.2. Label Elements

Signal Word

WARNING

hazard statements

Contains gas under pressure; may explode if heated

May displace oxygen and cause rapid suffocation



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Precautionary Statements

Storage

Protect from sunlight. Store in a well-ventilated place.

2.3. Hazards Not Otherwise Classified (HNOC)

Simple asphyxiants.

2.4. OTHER INFORMATION

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

3.1. Mixture

The following component(s) in this product are considered hazardous under applicable OSHA(USA).

Chemical name	CAS No	weight-%
Carbon Dioxide	124-38-9	60 - 100

4. First aid measures

4.1. Description of first aid measures

Eye Contact	None under normal use conditions. (Get medical attention immediately if symptoms occur.).
Skin contact	None under normal use conditions. (Get medical attention immediately if symptoms occur.).
Inhalation	Immediate medical attention is required. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. If breathing is irregular or stopped, administer artificial respiration.
Ingestion	None under normal use conditions. (Get medical attention immediately if symptoms occur.).

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms Unconsciousness.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians Treat symptomatically.



5. Fire-fighting measures

5.1. Suitable Extinguishing Media

Product is extinguishing agent. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers with flooding quantities of water until well after fire is out.

5.2. Unsuitable Extinguishing Media

None.

5.3. Specific Hazards Arising from the Chemical

Ruptured cylinders may rocket. Containers may explode when heated.

5.4. Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

5.5. Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions Provide adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment as required. Monitor oxygen levels.

For emergency responders Use personal protective equipment as required.

6.2. Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Not Applicable.

7. Handling and Storage

7.1. Precautions for Safe Handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Metals.

8. Exposure Controls/Personal Protection

**8.1. Control Parameters****Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Carbon Dioxide 124-38-9	STEL: 30000 ppm TWA: 5000 ppm	-	IDLH: 40000 ppm TWA: 5000 ppm TWA: 9000 mg/m ³ STEL: 30000 ppm STEL: 54000 mg/m ³

ACGIH (American Conference of Governmental Industrial Hygienists) OSHA (Occupational Safety and Health Administration of the US Department of Labor) NIOSH IDLH Immediately Dangerous to Life or Health:

8.2. Appropriate Engineering Controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection Use positive pressure airline respirator with escape cylinder or self-contained breathing apparatus for oxygen-deficient atmospheres (<19.5%).

Ventilation Use local exhaust ventilation to prevent accumulation of high concentrations and maintain air-oxygen levels at or above 19.5%.

8.4. General hygiene considerations

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Physical State	Compressed Gas	Color	Colorless
Odor	None		
odor threshold	No data available		
Property	VALUES	Remarks • Method	
pH	No data available		
Melting point/freezing point	No data available		
Boiling point / boiling range	-1.4 °C		
Flash Point	No data available		
Evaporation Rate	No data available		
flammability (solid, gas)	No data available		
Flammability limit in air			
Upper flammability limit:	No data available		
Lower flammability limit:	No data available		
Vapor Pressure	No data available		
Vapor Density	No data available		



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Specific gravity	No data available
Water Solubility	No data available
Solubility in Other Solvents	No data available
Partition coefficient	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Kinematic viscosity	No data available

10. Stability and Reactivity

10.1. Chemical Stability

Stable under recommended storage conditions.

10.2. Reactivity

No data available

10.3. Possibility of hazardous reactions

None under normal processing.

hazardous polymerization	Hazardous polymerization does not occur.
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10.4. Conditions to Avoid

Contact with water or moist air liberates irritating gas. Extremes of temperature and direct sunlight.

10.5. Incompatible Materials

Metals.

10.6. Hazardous decomposition products

None known.

11. Toxicological Information

11.1. Information on Likely Routes of Exposure

Product information	no data available
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INHALATION	In high concentration the gas may cause a suffocation. Victim may not be aware of asphyxiation. In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death.
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Eye Contact	None known.
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Skin contact	None known.
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INGESTION	Not an expected route of exposure.
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Acute Toxicity

**11.2. Information on Toxicological Effects**

Symptoms Unconsciousness.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

sensitization	No information available.
Germ Cell Mutagenicity	No information available
carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive Toxicity	Lack of oxygen during pregnancy has produced developmental abnormalities in humans and experimental animals.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Target organ effects	Respiratory System.
Aspiration Hazard	No information available.

11.4. Numerical Measures of Toxicity - Product information

The following values are calculated based on chapter 3.1 of the GHS document

12. Ecological Information**12.1. ecotoxicity**

The environmental impact of this product has not been fully investigated

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment

12.2. Persistence and Degradability

No information available.

12.3. Bioaccumulation

No information available.

12.4. Other Adverse Effects

No information available

13. Disposal Considerations**13.1. Waste Treatment Methods**

Disposal of wastes This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Do not reuse container. Pressurized container: Do not pierce or burn, even after use.

14. Transport Information



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DOT

UN/ID no	UN1013
Description	UN1013, Carbon dioxide, 2.2
Proper Shipping Name	Carbon dioxide
Hazard class	2.2
Emergency Response Guide Number	120

TDG

UN/ID no	UN1013
Description	UN1013, Carbon dioxide, 2.2
Proper Shipping Name	Carbon dioxide
Hazard class	2.2

MEX

UN/ID no	UN1013
Description	UN1013, Carbon dioxide, 2.2
Proper Shipping Name	Carbon dioxide
Hazard class	2.2

ICAO (air)

UN/ID no	UN1013
Description	UN1013, Carbon dioxide, 2.2
Proper Shipping Name	Carbon dioxide
Hazard class	2.2

IATA

UN/ID no	UN1013
Description	UN1013, Carbon dioxide, 2.2
Proper Shipping Name	Carbon dioxide
Hazard class	2.2
ERG Code	2L

IMDG

UN/ID no	UN1013
Description	UN1013, Carbon dioxide, 2.2
Proper Shipping Name	Carbon dioxide
Hazard class	2.2
EmS-No	F-C, S-V

15. Regulatory Information

15.1. International Inventories

TSCA	Complies
DSL/NDL	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances



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IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic health hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	Yes
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

15.3. US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Carbon Dioxide 124-38-9	X	X	X

16. Other information, including date of preparation of the last revision

NFPA	Health Hazards 1	flammability 0	Instability 0	Physical and chemical properties Simple asphyxiants
HMIS	Health Hazards 1	flammability 0	Physical Hazards 3	Personal Protection X

Revision date 25-May-2015

Revision note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



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End of Safety Data Sheet