



by Tyco Fire Suppression & Building Products

MATERIAL SAFETY DATA SHEET

CARBON DIOXIDE

Issue Date: 03-18-2011

1. Product and Company Identification

Material name	CARBON DIOXIDE
Version #	02
Revision date	03-18-2011
CAS #	124-38-9
Product use	Fire extinguishing agent
Manufacturer / Importer / Supplier	
Name	Tyco Fire Protection Products
Address	One Stanton Street Marinette, WI 54143-2542
Phone	715-735-7411
Internet	http://www.ansul.com
Emergency Phone Number	CHEMTREC 800-424-9300 or 703-527-3887

2. Hazards Identification

Emergency overview	DANGER
	Contents under pressure. Heat may cause the containers to explode.
OSHA regulatory status	This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation.
Eyes	None known.
Skin	None known.
Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.
Ingestion	Not a likely route of entry.
Potential environmental effects	Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Components	CAS #	Percent
CARBON DIOXIDE	124-38-9	90 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Flush thoroughly with water for at least 15 minutes. Get medical assistance.
Skin contact	Rinse with water.
Inhalation	Remove to fresh air.
Ingestion	Not likely, due to the form of the product.
General advice	If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	The product is not flammable. No unusual fire or explosion hazards noted.
Extinguishing media	
Suitable extinguishing media	This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

Protection of firefighters**Specific hazards arising from the chemical**

Contents under pressure. Pressurized container may explode when exposed to heat or flame.

Specific methods

None known.

6. Accidental Release Measures**Personal precautions**

None known.

Environmental precautions

No special environmental precautions required.

Methods for containment

Move the cylinder to a safe and open area if the leak is irreparable.

Methods for cleaning up

Not applicable.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage**Handling**

Handle and open container with care.

Storage

Contents under pressure. Use care in handling/storage.

8. Exposure Controls / Personal Protection**Occupational exposure limits****ACGIH****Material****Type****Value**

CARBON DIOXIDE (124-38-9)

STEL

30000.0000 ppm

TWA

5000.0000 ppm

U.S. - OSHA**Material****Type****Value**

CARBON DIOXIDE (124-38-9)

PEL

5000.0000 ppm

9000.0000

mg/m3

STEL

54000.0000

mg/m3

TWA

30000.0000 ppm

10000.0000 ppm

18000.0000

mg/m3

Personal protective equipment**Eye / face protection**

Not normally needed.

Skin protection

No special protective equipment required.

Respiratory protection

No personal respiratory protective equipment normally required.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties**Appearance****Color**

Not available.

Odor

Not available.

Physical state

Gas.

pH

3.2 - 3.7 The pH of saturated CO2 solutions varies from 3.7 at 101 kPa (1 atm) to 3.2 at 2370 kPa (23.4 atm)

Melting point

Not available.

Freezing point

Not available.

Boiling point

-110.2 °F (-78.5 °C)

Flash point

Not available.

Evaporation rate

Not available.

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Vapor pressure 6439.45 kPa

Vapor density 1.522 at 21°C

Specific gravity 1.512

Relative density Not available.

Solubility (water) 2 g/l

Partition coefficient (n-octanol/water) Not available

Auto-ignition temperature Not available.

Decomposition temperature Not available.

VOC Not available.

Molecular weight 44.01 g/mol

Molecular formula C-O2

10. Chemical Stability & Reactivity Information

Chemical stability Material is stable under normal conditions.

Conditions to avoid Excessive heat.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological Information

Chronic effects Prolonged inhalation may be harmful.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. Ecological Information

Ecotoxicity This product has no known eco-toxicological effects.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not applicable.

Contaminated packaging Not applicable.

14. Transport Information

DOT

Basic shipping requirements:

UN number UN1013
Proper shipping name Carbon dioxide
Hazard class 2.2
Subsidiary hazard class 2.2
Packaging exceptions 306
Packaging non bulk 302, 304
Packaging bulk 302, 314, 315
ERG number 120



DOT

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Acute Health - No
Chronic Health - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

CARBON DIOXIDE (CAS 124-38-9)

Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 0
Instability: 0

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.

Issue date

03-18-2011

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Product and Company Identification