



MATERIAL SAFETY DATA SHEET

by Tyco Fire Suppression & Building Products

CARBON DIOXIDE

Issue Date: 03-18-2011

1. Product and Company Identification

Material name	CARBON DIOXIDE
Version #	02
Revision date	03-18-2011
Chemical name	CARBON DIOXIDE
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.
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	60 - 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

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.
Protective equipment for firefighters	None known.
Special protective equipment for fire-fighters	None known.
Specific methods	None known.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

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. Use care in handling/storage.
Storage	Contents under pressure. Keep away from heat and sources of ignition. Store in a well-ventilated place.

8. Exposure Controls / Personal Protection

Occupational exposure limits

Canada - British Columbia

Material	Type	Value
CARBON DIOXIDE (124-38-9)	STEL	15000.0000 ppm
	TWA	5000.0000 ppm

Canada - Ontario

Material	Type	Value
CARBON DIOXIDE (124-38-9)	STEL	54000.0000
		mg/m3
	TWA	30000.0000 ppm
		9000.0000
		mg/m3
		5000.0000 ppm

Canada - Quebec

Material	Type	Value
CARBON DIOXIDE (124-38-9)	STEL	54000.0000
		mg/m3
	TWA	30000.0000 ppm
		9000.0000
		mg/m3
		5000.0000 ppm

Engineering controls	General ventilation normally adequate.
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.

9. Physical & Chemical Properties

Appearance

Form	Compressed gas.
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.

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. Not expected to be hazardous by WHMIS criteria.

12. Ecological Information

Ecotoxicity

This product has no known eco-toxicological effects.

Persistence and degradability

Not available.

Partition coefficient (n-octanol/water)

Not available

13. Disposal Considerations

Disposal instructions

Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products

Dispose of in accordance with local regulations.

Contaminated packaging

Not applicable.

14. Transport Information

TDG

Proper shipping name

CARBON DIOXIDE

Hazard class 2.2
Subsidiary hazard class 2.2
UN number UN1013



TDG

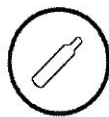
15. Regulatory Information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Controlled

WHMIS classification A - Compressed Gas

WHMIS labeling



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)

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