

I. Identification of the Substance/Preparation and of the Company

Trade Name: Carbon Dioxide
Manufacturer/Supplier: ANSUL INCORPORATED
Address: One Stanton Street, Marinette, WI 54143-2542
Prepared by: Safety and Health Department
Phone: 715-735-7411
Fax: 715-732-3472
Internet/Home Page: <http://www.ansul.com>
Emergency Phone Number: CHEMTREC 800-424-9300 or 703-527-3887
Date of Issue: February 2002

II. Composition/Information on Ingredients

Component	Wt. %	CAS No.	EINECS	Class, R, and S Phrases
Carbon Dioxide	100	124-38-9	204-696-9	(See Section XV)

III. Hazards Identification

For Humans

Threshold Limit Values: OSHA PEL: 5,000 ppm
ACGIH TLV-TWA: 5000 ppm
ACGIH TLV-STEL: 30,000 ppm.

Signs and Symptoms:

Acute Exposure:

Eye Contact: Contact with carbon dioxide snow (dry ice) can produce chilling sensations and discomfort, also frostbite.

Inhalation: Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations of vapor can cause lightheadedness, giddiness, shortness of breath, muscular tremors, and weakness, acrocyanosis. Also unconsciousness or even death.

Skin Contact: Evaporation of liquid from the skin can produce chilling sensations. Frostbite can occur. Avoid carbon dioxide snow (dry ice).

Ingestion: Ingestion is not likely to occur since this material is a gas at room temperature.

Medical Conditions Generally Aggravated by Exposure: Respiratory problems.

Chemical Listed as Carcinogen or Potential Carcinogen:

National Toxicology Program No I.A.R.C. Monographs No OSHA No

For Environment: (See Section XII).

WHMIS Information:



CLASS A

IV. First-Aid Measures

Inhalation: Remove victim to fresh air. If cough or other respiratory symptoms occur, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult medical personnel.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. If redness, itching or a burning sensation develops, get medical attention. Treat for frostbite if necessary.

Skin Contact: Wash the material off the skin with copious amounts of soap and water for at least 15 minutes. If redness, itching or burning sensation develops, get medical attention. Treat for frostbite if necessary.

Ingestion: None needed.

V. Fire-Fighting Measures

Extinguishing Media: THIS IS AN EXTINGUISHING AGENT.

Special Procedures: None.

Unusual Fire and Explosion Hazards: Though gas cylinders are equipped with pressure and temperature relief devices, they should be removed from high temperatures or fire to avoid risk of rupture.

VI. Accidental Release Measures

Personal Precautions:	Evacuate area and ventilate to outside atmosphere. Cool or remove hot, metal surfaces or source of non-extinguishing flames.
Respiratory Protection:	(See Section VIII)
Hand Protection:	(See Section VIII)
Eye Protection:	(See Section VIII)
Skin and Body Protection:	(See Section VIII)
Clean up Precautions:	This is a gas at room temperature and will dissipate or be vented to the outside atmosphere.
Waste Disposal Methods:	(See Section XIII)

VII. Handling and Storage

Precautions in handling and storage:	Store containers in a clean dry, well-ventilated area, away from heat above 120 °F. Store as a compressed gas in DOT-approved vessels. If cylinder or cartridge is not attached to a system, it must be safety-capped to protect against violent vessel movement or force of escaping gas if valve is actuated or seal is punctured.
Other precautions:	Note incompatibility information. (See Section X.)

VIII. Exposure Controls/Personal Protection

Respiratory:	Not normally necessary if controls are adequate. If TLV is exceeded or if exposure is prolonged, a self-contained breathing apparatus is recommended.
Ventilation:	Local exhaust is recommended in confined spaces. For general areas mechanical ventilation is recommended.
Hand:	Protective gloves for contact with dry ice.
Eye:	Chemical goggles recommended when handling liquid.
Skin and Body:	Protective clothing for contact with dry ice.

IX. Physical and Chemical Properties

Appearance:	Gas.
Color:	Colorless.
Odor:	None.
Relative Density (H ₂ O = 1):	Not applicable.
Solubility in Water:	88 ml CO ₂ per 100 ml H ₂ O @ 20 °C.
pH (If in water, % Conc.) :	Not determined.
Boiling Point:	Sublimes.
Vapor Pressure (mm Hg):	830 PSI @ 20 °C.
Vapor Density (Air =1):	1.5.
Flash Point:	None.
Flammability Limits in Air (% by volume):	Nonflammable.
Autoflammability	None.
Explosive Properties:	None.
Oxidizing Properties:	None.

X. Stability and Reactivity

Stability:	Stable <input checked="" type="checkbox"/>	Unstable <input type="checkbox"/>
Conditions to Avoid:	None known.	
Hazardous Reactions:	Will not occur <input checked="" type="checkbox"/>	May occur <input type="checkbox"/>
Conditions to Avoid:	None known.	
Materials to Avoid:	(Al + Na ₂ O ₂), Cs ₂ O, Li, K, MgC ₂ H ₅) ₂ , (Mg + Na ₂ O, KHC ₂ , Na, Na ₂ C ₂ , NaK, and Ti.	
Hazardous Decomposition Products:	None.	

XI. Toxicological Information

Toxicity Data:	Inhalation (human) LC _{LO}	100,000 ppm/min.
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XII. Ecological Information

Mobility:	Atmospheric gas.
Absorption/Desorption:	Atmospheric gas.
Degradability:	Atmospheric gas.
Biotic and Abiotic Degradation:	Atmospheric gas.
Aerobic and Anaerobic Degradation:	Atmospheric gas.
Persistence:	Atmospheric gas.
Accumulation:	Atmospheric gas.
Bioaccumulation Potential:	Atmospheric gas.
Biomagnification:	Atmospheric gas.
Short and Long Term Effects on:	
Ecotoxicity	Atmospheric gas.
Aquatic Organisms:	Atmospheric gas.
Soil Organisms:	Atmospheric gas.
Plants and Terrestrial animals:	Atmospheric gas.
Other Adverse Effects:	Atmospheric gas.
Ozone Depletion Potential:	Atmospheric gas.
Photochemical Ozone Creation Potential:	Atmospheric gas.
Global Warming Potential:	Global Warming gas.
Effects on Waste Water Treatment Plants:	Atmospheric gas.

XIII. Disposal Considerations

Dispose of in Compliance with local, state, and national regulations.

XIV. Transport Information

Hazard Class: Carbon Dioxide, Class 2.2, UN1013.
 Label: Nonflammable gas.
 Emergency response guide page number: 120; EMS (Intl): 2-09.
 For additional transport information, contact Ansul Incorporated.

XV. Regulatory Information

Product:
 EU Classification: Nonflammable gas.
 R Phrases: None.
 S Phrases: 9 Keep container in a well-ventilated place.
 Limit Values for Exposure:
 Threshold Limit Values: OSHA PEL: 5,000 ppm
 ACGIH TLV-TWA: 5000 ppm
 ACGIH TLV-STEL: 30,000 ppm.
 EINECS Status: All components are included in EINECS inventories.
 Restrictions on Marketing and Use: None
 Refer to any other national measures that may be relevant.

XVI. Other Information

None known.

XVII. Disclaimer

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ANSUL SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

MSDS available at <http://www.ansul.com>