



Special Effects Equipment & Supplies

14525 Bessemer St. Van Nuys, CA. 91411

(818) 994-3049

For Chemical Emergency call Infotrac @ 1-800-535-5053

Material Safety Data Sheet

Section 1 - Product Information

Product Name: Carbon Dioxide

Chemical Name: Carbon Dioxide

Section 2 - Hazardous Ingredients

<u>Chemical Name</u>	<u>CAS#</u>	<u>Percentage</u>
----------------------	-------------	-------------------

Carbon Dioxide	124-38-9	100%
----------------	----------	------

Exposure Limits	Permissible Exposure Limit:	5,000 ppm (9,000 mg/m ³)
	Ceiling Limits:	N/A
	Short Term Exposure Limit:	N/A
	Can be harmful to skin?:	Yes

Section 3 - Physical/Chemical Characteristics

Boiling Point	Sublimes	Solubility in Water	88 ml CO ₂ per 100 ml
----------------------	----------	----------------------------	----------------------------------

Vapor Pressure (mm Hg)	830 psi	Specific Gravity (H₂O = 1)	N/A
-------------------------------	---------	--	-----

Vapor Density (Air = 1)	1.5	Melting Point	N/A
--------------------------------	-----	----------------------	-----

Appearance and Odor / Odor threshold	Colorless, odorless gas.
---	--------------------------

Evaporation Rate (Butyl Acetate = 1)		PH	N/D
---	--	-----------	-----

Freezing Point	N/A
-----------------------	-----

Section 4 - Fire and Explosion Data

Lower Explosive/Flammability Limit	N/A	Flash Point	None
---	-----	--------------------	------

Upper Explosive/Flammability Limit	N/A	Autoignition Temperature	Does not ignite
---	-----	---------------------------------	-----------------

Extinguishing Media	There are NO extinguishing media which must not be used for safety reasons.
----------------------------	---

Fire Fighting Measures	Though gas cylinders are equipped with pressure and temperature relief devices, they should be removed from high temperature areas or fires, if safe to do so, to avoid risk of rupture.
-------------------------------	--

Fire or Explosion Hazards	Not explosive.
----------------------------------	----------------

Section 5 - Reactivity Data

Chemical Stability	Normally stable.
---------------------------	------------------

Incompatibility	(Al + Na ₂ O ₂), (Mg + Na ₂ O), Cs ₂ O, Li, K, Mg(c ₂ H ₅) ₂ , KC ₂ H, Na, NaK and TI
------------------------	---

Conditions to Avoid	Extremely high temperatures, as in a fire may cause a cylinder to fail. There are no known conditions such as temperature, pressure, light, shock, etc., which may cause a dangerous reaction.
----------------------------	--

Hazardous Decomposition or Byproducts	There are no hazardous combustion or decomposition products.
--	--

Hazardous Polymerization	Will not occur.
---------------------------------	-----------------

Section 6 - Health Hazard Data

Routes of Entry	Eye contact, skin contact, inhalation.	
Health Hazards	See Signs and Symptoms of Exposure.	
Carcinogenicity	Not listed by National Toxicology Program, I.A.R.C., or OSHA.	
Signs and Symptoms of Exposure	<i>Eye Contact:</i> Contact with snow (dry ice) can produce chilling sensations and discomfort, also frostbite.	
	<i>Skin Contact:</i> Evaporation of liquid from the skin can produce chilling sensations. Frostbite can occur. Avoid carbon dioxide snow (dry ice).	
	<i>Inhalation:</i> Vapour is heavier than air and can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations of vapour can cause lightheadedness, giddiness, shortness of breath, muscular tremors, and weakness, acrocyanosis. Also unconsciousness or even death.	
	<i>Ingestion:</i> Not likely to occur since this substance is a gas at room temperature.	
	Medical conditions generally aggravated by exposure	Respiratory problems can be aggravated by exposure.
	Emergency and First Aid Procedures	Eye Contact: Immediately flush eyes with water for a minimum of 15 minutes. If redness, itching or a burning sensation develops, get medical attention. Treat for frostbite is necessary.
		Skin Contact: If redness, itching or a burning sensation develops, get medical attention. Treat for frostbite if necessary.
		Inhalation: Remove victim to fresh air. If cough or other respiratory symptoms occur, consult medical personnel. If not breathing, give artificial respiration, preferable mouth-to-mouth. If breathing is difficult, give oxygen. Consult medical personnel.
Ingestion: None needed.		

Section 7 - Precautions for Safe Handling and Use

Spill or Release Data	This substance will vaporize into the atmosphere.
Waste Disposal Method	Since this is a gas at normal conditions, release should be only as needed to extinguish fires.
Handling and Storage	For personal protection : prevent skin and eye contact, see section 8. Care should be taken in handling all chemical substances and preparations. Secure to prevent falling. Do not move without safety cap in place to prevent damage to valve. Store containers in a clean, dry, well-ventilated area, away from heat. Store as a compressed gas in DOT approved vessels. Keep safety cap in place while in storage.
Other Precautions	The intended or recommended use is as a fire extinguishing agent.

Section 8 - Control Measures

Respiratory Protection	Not expected to be needed if controls are adequate. If PEL is exceeded or if exposure is prolonged, a self-contained breathing apparatus is recommended. Maintain good ventilation during use of this substance in order to minimize worker exposure.
Protective Gloves	Protective gloves for contact with dry ice.
Eye Protection	Use safety glasses with side shields or safety goggles particularly when handling the liquid.
Other Protective Equip.	Protective clothing as needed for contact with dry ice.
Ventilation	Maintain levels below PEL
Work/Hygienic Practices	N/A

To the best of our knowledge, the information contained above is accurate. However, neither the above named supplier nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained above.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described above, we cannot guarantee that these are the only hazards that exist.

Prepared: October 2006