



## MATERIAL SAFETY DATA SHEET

### Carbon Dioxide, Gas

#### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS

**Product Name** Carbon Dioxide  
MTG MSDS 17; CARBONIC ACID GAS; CARBONIC ANHYDRIDE; CARBON DIOXIDE; CARBON OXIDE; UN 1013;

**Other Trade Names** CO2; MAT04260; RTECS FF6400000

**Product Description** Colorless, odorless gas

**Manufacturer/Supplier** Minimax – USA LLC

**Address** 4030 E. Quenton Drive Suite 112  
Mesa, AZ 85215  
USA

**Phone Number** (888) 882-0191  
(480) 553-5670

**ChemTel Number** (888) 225-3924  
(for emergencies only) (813) -248-0573 (International)

**Revision Date:** March 29,2012

**MSDS Date:** March 19, 2003

#### 2. HAZARDS IDENTIFICATION

Carbon Dioxide, Gas

##### Routes of Entry

- Inhalation or skin contact

##### Carcinogenic Status

See Section 11 - Toxicity

##### Target Organs

- Respiratory System

##### Health Effects - Eyes

Irritation, frostbite, blurred vision.

##### Health Effects - Skin

Blisters or frostbite.

##### Health Effects - Ingestion

Ingestion of a gas is unlikely.

##### Health Effects - Inhalation

Ringling in the ears, nausea, irregular heartbeat, headache, drowsiness, dizziness, tingling sensation, visual disturbances, suffocation, convulsions, coma.

Physical Hazards – Containers may rupture or explode if exposed to heat.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
CARBON DIOXIDE, GAS	124-38-9	100.0%	None	None

Keep container in a well ventilated place

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### 4. FIRST AID MEASURES

#### Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

#### Skin

If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). **DO NOT USE HOT WATER.** If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

#### Ingestion

If a large amount is swallowed, get medical attention

#### Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

#### Note to Physician

For inhalation, consider oxygen.

### 5. FIRE - FIGHTING MEASURES

#### Extinguishing Media

Use carbon dioxide, regular dry chemical. For large fires use regular foam or flood with fine water spray.

#### Unusual Fire and Explosion Hazards

Negligible fire hazard. Pressurized containers may rupture or explode if exposed to sufficient heat.

#### Fire-Fighting

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends or tanks. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Do not get water directly on material. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

### 6. ACCIDENTAL RELEASE MEASURES

Do not touch spilled material. Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.

### 7. HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Occupational exposure limits are listed below, if they exist.

**Carbon Dioxide, Gas:**

**Carbon Dioxide:**

**5000 ppm (9000 mg/m<sup>3</sup>) OSHA TWA**

**10000 ppm (18000 mg/m<sup>3</sup>) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)**

**30000 ppm (54000 mg/m<sup>3</sup>) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)**

**5000 ppm ACGIH TWA**

**30000 ppm ACGIH STEL**

**5000 ppm (9000 mg/m<sup>3</sup>) NIOSH recommended TWA 10 hour(s)**

**30000 ppm (54000 mg/m<sup>3</sup>) NIOSH recommended STEL**

**Engineering Control Measures**

Use local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**Respiratory Protection**

The following respirators and maximum use concentrations are drawn from NIOSHA and/or OSHA.

**40,000 PPM – Any supplied-air respirator. Any self-contained breathing apparatus with a full facepiece**

**Escape – Any appropriate escape-type, self-contained breathing apparatus.**

**For unknown concentrations or immediately danger to Life or Health –**

**Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.**

**Hand Protection**

**Wear insulated gloves.**

**Eye Protection**

**For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.**

**Body Protection**

**For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.**

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	Gas
Color	Colorless
Odor	Odorless
Taste	Acid taste
Molecular Weight	44.01
Molecular Formula	C-O2
Boiling Point	Not available
Freezing Point	-71 F (-57 C) @ 4000 mmHg
Sublimation Point	-110 F (-79 C)
Vapor Pressure	43700 mmHg @ 21 C
Vapor Density (air=1)	1.5
Specific Gravity (water=1)	1.522 @ 21 C
Water Solubility	Soluble
PH	Acidic in solution
Volatility	Not applicable
Odor Threshold	Not applicable
Evaporation Rate	Not applicable
Solvent Solubility	Alcohol, acetone, hydrocarbons, organic solvents
Coefficient of water/oil distribution	Not applicable

**10. STABILITY AND REACTIVITY****Reactivity**

Stable at normal temperatures and pressure

**Conditions to Avoid**

- Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Avoid contact with water or moisture.

**Incompatibilities**

Combustible materials, oxidizing materials, metal salts, reducing agents, metal carbide, metals, bases

**Hazardous Polymerization**

Will not polymerize.

**Hazardous Decomposition Products**

- Thermal decomposition products: Miscellaneous decomposition products.

**11. TOXICOLOGICAL INFORMATION**

- N**
- ACUTE TOXICITY LEVEL:** Insufficient Data.  
**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Heart or cardiovascular disorders, respiratory disorders.

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**Carbon Dioxide, Gas****12. ECOLOGICAL INFORMATION**

**Fish Toxicity** 150000 ug/L 48 day(s) (Mortality) Brown trout  
(Salmo trutta)

**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all applicable regulations.

Since regulations vary, consult applicable regulations or authorities before disposal.

**14. TRANSPORT INFORMATION**

U.S. DOT 49 CFR 172.101 Data	Not regulated
UN Proper Shipping Name	Carbon Dioxide
UN Class	2.2
UN Number	UN1013
UN Packaging Group	2.2

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS**

Shipping Name	Carbon Dioxide
UN Proper Shipping Name	Carbon Dioxide
UN Number	UN1013
UN Class	2.2

**15. REGULATORY INFORMATION****US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS****CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.1)**

Not regulated.

**SARA Title III Sect. 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30)**

Not regulated.

**SARA Title III Sect. 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30)**

Not regulated.

**SARA Title III Sect. 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21)**

ACUTE: Yes

CHRONIC: No

FIRE: No

REACTIVE: No

SUDDEN RELEASE: Yes

**SARA Title III Sect. 313 (40 CFR 372.65)**

Not regulated.

**OSHA PROCESS SAFETY (29 CFR 1910.119)**

Not regulated.



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#### NATIONAL INVENTORY STATUS:

TSCA 12(b) EXPORT NOTIFICATION

Not listed.

TSCA U.S. INVENTORY

Listed on inventory.

CANADA INVENTORY (DSL/NDSL)

Listed on inventory.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: A

#### 16. OTHER INFORMATION

##### NFPA Ratings

NFPA Code for Health - 2

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

##### HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of the chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for the use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

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