

Item # 04635

OFI TESTING EQUIPMENT, INC.  
MATERIAL SAFETY DATA SHEET

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SECTION I - PRODUCT IDENTIFICATION

Chemical Name: CARBON DIOXIDE GAS  
Trade Name: CO<sub>2</sub> CARTRIDGES  
OFI Part No. 143-05  
Chemical Family: Carbonic anhydride, carbonic acid gas  
Formula: CO<sub>2</sub>

SECTION II - HAZARDOUS CONSTITUENTS

CAS # CHEMICAL NAME  
124-38-9 Carbon Dioxide > 99.0%

SECTION III - PHYSICAL PROPERTIES

Appearance / Odor: Colorless / Odorless  
Solubility: 87.8 @ 68 °F (v/v) in water.  
Density: Gas  
pH: No Information Found  
% Volatiles by Vol.: No Information Found  
Melting Point: No Information Found  
Boiling Point: Sublimes - 109.3 °C  
Vapor Density (Air=1): 1.53  
Vapor Pressure (mmHg): 816 psig @ 20 °C

SECTION IV - FIRE, EXPLOSION AND REACTIVITY

Fire: Not Considered to be a Fire Hazard. Non-Flammable Gas.  
Explosion: Not Considered to be an Explosion Hazard. Cartridge Rupture may Occur Under Fire Conditions.  
Fire Extinguishing Media: Use What is Appropriate for Surrounding Fire.  
Special Information: In the Event of Fire, Wear Full Protective Clothing and NIOSH-Approved Self-Contained Breathing Apparatus with Full Facepiece Operated in the Pressure Demand or Other Positive Pressure Mode. Keep Cartridges Cool with Water Spray.  
General Reactivity: Stable Under Ordinary Conditions of Use and Storage.  
Hazardous Decomposition: Toxic Carbon Monoxide may be Given Off During Combustion.  
Incompatibilities: Temperatures above 3,092 °F (1,700 °C). This Weakly Acidic Material will React with Alkaline Materials to Form Carbonates and Bicarbonates.  
Hazardous Polymerization: Will Not Occur.

SECTION V - HEALTH HAZARD INFORMATION

Inhalation: May Cause Rapid Respiration, Muscular Incoordination, Fatigue, Nausea and Vomiting and Unconsciousness.  
Ingestion: No Information Found.  
Skin: Pressure drop Through Valves and Piping may Cause Extreme Cold and Frostbite on Contact.  
Eye Contact: No Information Found.  
Chronic Exposure: No Information Found.

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**SECTION V - HEALTH, HAZARD INFORMATION (cont.)**

**Carcinogenic References:** NTP Carcinogen - Known: No, IARC Category- None  
**Aggravated by Exposure:** Exposure to Carbon Dioxide at 1 to 4% Concentrations Result in Increased Respiratory Volume. Material acts as a Simple Asphyxiant by Displacing Air Necessary for Life.

**SECTION VI - EMERGENCY & FIRST AID PROCEDURES**

**Inhalation:** Immediately Remove Victim to Fresh Air. If Breathing has Stopped, Give Artificial Respiration. If Breathing is Difficult, Give Oxygen and Get Medical Attention.  
**Ingestion:** No Information Found.  
**Skin:** If Frostbite Occurs, Flush Affected Areas with Lukewarm Water. Do Not Use Hot Water. Get Medical Attention.  
**Eyes:** No Information Found.

**SECTION VII - INDUSTRIAL HYGIENE MEASURES**

**Ventilation System:** A System of Local and/or General Exhaust is Recommended to Keep Employee Exposures Below the Airborne Exposure Limits. Local Exhaust Ventilation is Generally Preferred Because it can Control the Emissions of the Contaminant at its Source, Preventing Dispersion of it into the General Work Area.  
**Airborne Exposure Limits:** ACGIH Threshold Limit Value (TLV), 5000 ppm, OSHA (PEL) 5000 ppm, (STEL) 30,000.  
**Personal Respirators:** Use a Self-Contained Breathing Apparatus in Case of Emergency or Non-Routine Use. (NIOSH APPROVED)  
**Skin Protection:** Loose Fitting Gloves or Impermeable Material, Such as Leather, When Working with Cold Liquid, Solid or Vapor.  
**Eye Protection:** Use Safety Glasses.

**SECTION VIII - INDUSTRIAL HYGIENE MEASURES**

**Accidental Release:** Ventilate Area of Leak or Spill. Wear Appropriate Personal Protective Equipment as Specified in Section 7. Shut Off Source if Possible and Remove Source of Heat. Remove Leaking Cylinder to Exhaust Hood or Safe Outdoor Area if This can be Done Safely.  
**Disposal:** Dispose of Non-Refillable Cylinders in Accordance with Federal, State and Local Regulations. Allow Gas to Vent Slowly to Atmosphere in an Unconfined Area or Exhaust Hood. If the Cylinders are the Refillable Type, Return Cylinders to Supplier with any Valve Outlet Plugs or Caps Secured and Valve Protection Caps in Place.  
**Environmental Fate:** No Information Found.

**SECTION IX - SPECIAL PRECAUTIONS**

**Handling and Storage:** Store in well Ventilated Areas and Away from Heat. Protect Containers from Physical Damage. Do Not Deface Cylinders or Labels. Cylinders should be Refilled by Qualified Producers of Compressed Gas.

**SECTION X - DOT SHIPPING REQUIREMENTS**

**Shipping Name:** CARBON DIOXIDE  
**Hazard Class:** 2.2 (NON-FLAMMABLE GAS)  
**Identification No.:** UN1013  
**NFPA Rating:** HEALTH-1, FLAMMABILITY-0, REACTIVITY-0

**SECTION XI - IN CASE OF EMERGENCY**

(713) 880 - 9884 OFI TESTING EQUIPMENT, INC. - Regular Business Hours  
(713) 880 - 9885 OFI TESTING EQUIPMENT, INC. - After Regular Business Hours