

	United States <b>Environmental Protection Agency</b> Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <b>226152</b>
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**Application for Pesticide - Section I**

1. Company/Product Number <b>38719-5</b>	2. EPA Product Manager <b>Ruth Douglas</b>	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>Carbon Dioxide</b>	PM# <b>32</b>	
5. Name and Address of Applicant (Include ZIP Code) <b>BOC Gases</b> <b>575 Mountain Ave.</b> <b>Murray Hill, NJ 07974</b> <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. <b>38719-5</b> Product Name <b>Carbon Dioxide</b>	

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)  
*Notification of text change on label to include O<sub>2</sub> level specification under the aeration portion of the label.*

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes" Unit Packaging wgt. _____ No. per container _____	If "Yes" Package wgt. _____ No. per container _____	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container _____		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name <b>Theresa Choh-Lee</b>	Title <b>Food Marketing Specialist</b>	Telephone No. (Include Area Code) <b>908-774-1713</b>
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature	3. Title	1 of 7
4. Typed Name	5. Date	

# CARBON DIOXIDE

**ACTIVE INGREDIENT: CARBON DIOXIDE 99.95%**  
**INERT INGREDIENTS: (N<sub>2</sub>, H<sub>2</sub>O) 0.05%**  
**100.00%**

**KEEP OUT OF REACH OF CHILDREN**

## WARNING

**EXPOSURE MAY CAUSE SUFFOCATION & DEATH**  
**VENTILATE USE AREAS BEFORE ENTERING**

### STATEMENT OF PRACTICAL TREATMENT

If inhaled: Remove to fresh air immediately; keep victim lying down and warm. If breathing is difficult, give oxygen. Call physician immediately.

**WARNING:** May be fatal if inhaled. Do not breath vapor. For handling activities in enclosed areas during and after fumigation, use either a supplied-air respirator with MSHA/NIOSH approval number TC-19C or a self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number TC-13F.

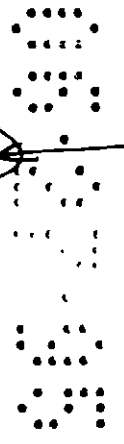
### AERATION

After fumigation, aerate treated areas until the level of CO<sub>2</sub> as measured by BOC recommended direct-reading detection devices suitable for use with the CO<sub>2</sub>, is below 5,000 ppm. A list of recommended devices can be found in Attachment A. Follow use instructions as written in the manufacturer's operation manual.

RE-ENTRY (below 5,000 ppm CO<sub>2</sub> and O<sub>2</sub> content of 21%)  
If CO<sub>2</sub> levels as below 5,000, persons may re-enter the treated area without respiratory protection.

RE-ENTRY (5,000-30,000 ppm CO<sub>2</sub> and O<sub>2</sub> content of 21%)  
If CO<sub>2</sub> levels are between 5,000 and 30,000, persons may re-enter the treated area without respiratory protection for 15 minutes or less. For periods longer than 15 minutes, persons must wear the respiratory protection device specified above under WARNING.

RE-ENTRY (greater than 30,000 ppm CO<sub>2</sub> and O<sub>2</sub> content of 21%)  
If CO<sub>2</sub> levels are over 30,000 ppm, persons must always wear the respiratory protection device specified above under WARNING.



**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**GENERAL USE RESTRICTIONS**

This product is used to fumigate silos, trucks, trailers, sealed railroad cars, and ships. The following raw agricultural commodities may be treated: wheat, oats, rice, barley, corn and processed foods. Dosage rates vary from 60% to 88%. Treatment times vary from 24 hours to 4 days. See U.S. Department of Agriculture manual AAT-S-13 titled "Methods of Applying Carbon Dioxide for Insect Control in Stored Grains" for details on treatment specifics. This product can be used in structures such as food handling, processing and storage facilities and residential structures at a rate from one to eleven pounds per 1,000 cubic feet, as an atmospheric conditioner or carrier in conjunction with an EPA registered pesticide (as long as the pesticide is also for use in food handling, production and storage facilities). Call BOC Gases, Food Marketing Department, at (908) 771-1117 for additional help.

Do not fumigate if grain temperature is low (less than 40°F). Area should be as gas tight as possible before treatment. Maintain as near to 60% CO<sub>2</sub> as possible.

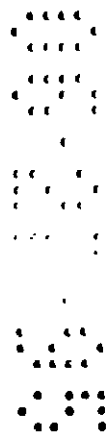
**TRAINING**

All persons working with this product should be knowledgeable of the hazards of this chemical, and trained in the use of required respirator equipment and detector devices, emergency procedures and use of the product. When used for fumigation of enclosed spaces, [boxcars, silos, ship containers, and other transport vehicles], two persons familiar with the use of this product must be present during introduction of the fumigant, initiation of aeration, and after aeration when testing for reentry. Two persons do not need to be present if monitoring is conducted remotely (outside of area being fumigated).

**PLACARDING STATEMENT**

The applicator must placard or post all entrances to the fumigated area with signs conforming to the following requirements:

- a) The sign shall be at least 14 inches by 16 inches in size and the letters shall be at least 1 inch in height unless a smaller size sign is necessary because the treated area is too small to accommodate a sign of this size. Letters shall be clearly legible.
- b) The signal word, "DANGER/PELIGRO" and the skull and crossbones symbol must be on the placard.
- c) The statement, "Area under fumigation, DO NOT ENTER/NO ENTRE."
- d) The date of fumigation.



- e) The name of the fumigant (carbon dioxide).
- f) Name, address and telephone number of the applicator or pesticide handler.

These signs must be posted at eye level and must be visible from all visible points of entry to the treated area. They must remain posted during application and throughout the restricted-entry interval until the concentration of carbon dioxide is below 5,000 ppm. Each separate treated area (i.e., boxcar, silo, ship container) must be posted or placarded with this sign.

The applicator or person responsible for monitoring levels of carbon dioxide may remove the placard when the concentration of carbon dioxide is at or below 5,000 ppm.

### FUMIGATION DIRECTIONS

#### Storage Vessel

Purge storage vessel (bin, silo, or sealed railcar) to a minimum concentration of 60% CO<sub>2</sub>. We recommend two day treatment for adult kill, four days for all life stages. Follow guidelines set forth in USDA AAT-S-13 manual. For specific flows, contact qualified BOC Gases or fumigation engineer.

#### Trucks & Trailers

Treat as above. Do not move Truck or Trailer during treatment. They must be aerated before movement is allowed.

#### Shipboard, Intransit Ship or Shiphold Fumigation

#### IMPORTANT

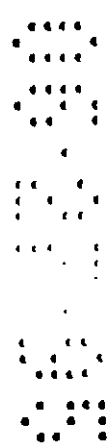
Shipboard, intransit ship or shiphold fumigation is also governed by U.S. Coast Guard Regulations. Refer to and comply with these regulations prior to fumigation.

### PROCEDURES

#### Prefumigation Procedures

1. Prior to fumigating a vessel for intransit cargo fumigation, the master of the vessel or his/her representative and the fumigator must determine whether the vessel is suitably designed and configured so as to allow for safe occupancy by the ship's crew throughout the duration of the fumigation. If it is determined that the design and configuration of the vessel does not allow for safe occupancy by the ship's crew throughout the duration of the fumigation, then the vessel will not be fumigated unless all crew members are removed from the vessel. The crew members will not be allowed to reoccupy the vessel until the vessel has been properly aerated and a determination has been made by the master of the vessel and the fumigator that the vessel is safe for occupancy.

2. The person responsible for the fumigation must notify the master of the vessel, or his representative, of the requirements relating to personal protection equipment, detection equipment and that a person qualified in the use of this equipment must accompany the vessel with



cargo under fumigation. Emergency procedures, cargo ventilation, periodic monitoring and inspections, and first aid measures must be discussed with and understood by the master of the vessel or his representative.

3. During the fumigation or until a manned vessel leaves port or the cargo is aerated, the person in charge of the fumigation shall insure that a qualified person using gas or vapor detection equipment tests spaces adjacent to spaces containing fumigated cargo and all regularly occupied spaces for fumigation leakage. If leakage of the fumigant is detected, the person in charge of the fumigation shall take action to correct the leakage, or shall inform the master of the vessel, or his representative, of the leakage so that corrective action can be taken.

4. If the fumigation is not completed and the vessel aerated before the manned vessel leaves port, the person in charge of the vessel shall insure that at least two units of personal protection equipment and one gas or vapor detection device, and a person qualified in the operation be on board the vessel during the voyage.

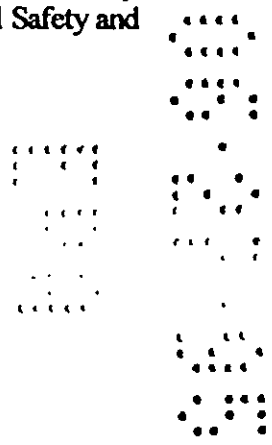
Precautions and Procedures During Voyage

Using appropriate gas detection equipment, monitor spaces adjacent to areas containing fumigated cargo and all regularly occupied areas for fumigant leakage. If leakage is detected, the area should be evacuated of all personnel, ventilated, and action taken to correct the leakage, before allowing the area to be occupied. Do not enter fumigated areas except under emergency conditions. If necessary to enter a fumigated area, appropriate personnel protection equipment must be used. Never enter fumigated areas alone. At least one other person, wearing personal protection equipment, should be available to assist in case of an emergency.

Precautions and Procedures During Discharge

If necessary to enter hold prior to discharge, test spaces directly above grain surface for fumigant concentration, using appropriate gas detection and personal protection equipment. Do not allow entry to fumigated areas without personal safety equipment unless fumigant concentrations are at safe levels, as indicated by a suitable detector.

"Personal protection equipment means an air supplied gas mask or respirator or a self-contained breathing apparatus (SCBA) for the fumigant, jointly approved by the Mining Enforcement and Safety Administration and the National Institute of Occupational Safety and Health."



## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

### Storage

Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area.

Store cylinders upright, secured to a rack or wall to prevent tipping. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs or similar devices to unload cylinders. Transport cylinders using hand truck or fork truck to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

### Spill and Leak Procedure Statement

Evacuate immediate area of leak. Use respiratory device (see Precautionary Statement) for entry into affected area to correct problem. Move leaking or damaged cylinders outdoors or to an isolated location, observing strict safety precautions. When completely empty, return to manufacturer or, if instructed, recycle/dispose of leaking or damaged cylinders or containers in accordance with State and Local waste disposal regulations.

Do not permit entry into spill area by unprotected persons until concentration of carbon dioxide is determined to be less than 5,000 ppm.

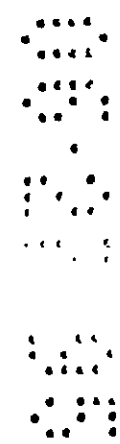
### Pesticide Disposal

Vent unusable carbon dioxide to open air.

Container Disposal: When cylinder is empty, close valve, screw safety cap onto valve outlet and replace protection bonnet before returning to shipper. Only the registrant is authorized to refill cylinders. Do not use cylinders for any other purpose. Follow registrant's instruction for return of empty or partially empty cylinders.

BOC GASES  
575 MOUNTAIN AVE.  
MURRAY HILL, NJ 07974

EPA REGISTRATION NO. 38719-5



# APPENDIX A

## BOC Recommended CO2 Detection Devices

National Draeger Company  
Pittsburgh, PA  
412-787-8383  
Device: Draeger Tubes  
(0-9,999 ppm)

GowMac Instrument Co.  
Bethlehem, PA  
610-954-9000  
Device: Model 20-600

