

38719-5

3/21/2011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Micah T. Reynolds
Technological Sciences Group Inc.
1150 18th St. NW Suite 1000
Washington, DC 20036

MAR 21 2011

Dear Mr. Reynolds:

Subject: Labeling Amendment
Carbon Dioxide
EPA Registration No. 38719-5
Submission Date: December 21, 2010

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions regarding this label, please contact Jennifer Urbanski at (703) 347-0156 or urbanski.jennifer@epa.gov.

Sincerely yours,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle
Product Manager (01)
Insecticide-Rodenticide Branch
Registration Division (7505P)

Enclosure- Stamped Label

CARBON DIOXIDE

ACTIVE INGREDIENT:

Carbon Dioxide 99.95%

OTHER INGREDIENTS: 0.05%

TOTAL 100.00%

KEEP OUT OF REACH OF CHILDREN

WARNING

FIRST AID	
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor immediately for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information concerning this product, call 1-800-222-1222.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS – WARNING: May be fatal if inhaled. Do not breathe vapor. Exposure may cause suffocation and death. Ventilate areas before entering. For handling activities in enclosed areas during and after fumigation, use either a supplied-air respirator with NIOSH approval number TC-19C or a self-contained breathing apparatus (SCBA) with NIOSH approval number TC-13F.

EPA Reg. No.: 38719-5

EPA Est. No.: XXXXX-XX-XXX

Net Wt.: XX

Lot No.: XX

Linde LLC
575 Mountain Avenue
Murray Hill, NJ 07974

ACCEPTED
MAR 21 2011

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for the
pesticide registered under:

EPA. Reg. No: 38719-5

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all directions for use carefully before applying.

AERATION

After fumigation, aerate treated areas until the level of CO₂, as measured by commercially available analyzers, is below 5,000 ppm. Follow the instructions as written in the manufacturer's operation manual.

RE-ENTRY (below 5,000 ppm CO₂):

If CO₂ levels are below 5,000 ppm, persons may re-enter the treated area without respiratory protection.

RE-ENTRY (between 5,000-30,000 ppm CO₂):

If CO₂ levels are between 5,000 and 30,000 ppm, 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 in the PRECAUTIONARY STATEMENTS.

RE-ENTRY (greater than 30,000 ppm CO₂):

If CO₂ levels are over 30,000 ppm, persons must always wear the respiratory protection device specified in the PRECAUTIONARY STATEMENTS.

The U.S.D.A. has set a limit of 0.5% (5,000 ppm) maximum CO₂ concentration in work areas.

USE RESTRICTIONS

This product is used to fumigate silos, storages, trucks, trailers, sealed railroad cars, and ships. The following agricultural commodities and other products may be treated: corn, including popcorn, barley, oats, rice (milled and/or enriched), sorghum, wheat, rye and other small grains, cocoa beans, coffee beans, flour, cereal and related products, all dry beans, peas, macaroni and pasta products, dry milk and products made with dry milk, nuts including peanuts, almonds, walnuts, pecans, filberts, cashews and brazil nuts, dried fruits including apples, apricots, currants, dates, figs, peaches, prunes, pears and raisins, raw and processed tobacco, brewer's grits, candy, all spices, all herbs, animal feed in bulk or bags, birdseed, mammal skins, stuffed animals, herbarium, specimens, rare books and wood products such as carvings.

This product is effective against the following types of insects that occur in stored products or in structures that may be fumigated with this product:

- 1) **Beetles**, including the granary weevil, rice weevil, broadnosed grain weevil, lesser grain borer, larger grain borer, confused flour beetle, red flour beetle, American black flour beetle, khapra beetle, warehouse beetle, longheaded flour beetle, slender-horned flour beetle, larger black flour beetle, yellow mealworm, dark mealworm, black carpet beetle, rusty grain beetle, flat grain beetle, saw-toothed grain beetle, merchant grain beetle, foreign grain beetle, corn sap beetle, cigarette beetle, drugstore beetle, cowpea weevil, bean weevil, pea weevil, broadbean weevil, coffee bean weevil and cadelle;
- 2) **Psocoptera**, including the book louse;
- 3) **Moths**, including the Angoumois grain moth, Indian meal moth, almond moth, raisin moth, tobacco moth, Mediterranean flour moth, meal moth, rice moth, navel orangeworm, webbing clothe moth, casemaking clothes moth and carpet moth.

Dosage rates vary from 60% atmosphere to 88% atmosphere. Treatment times vary from 24 hours to 4 days.

Do not fumigate if grain temperature is less than 40°F. Area should be as gas tight as possible before treatment. Maintain as near as 60% ±10% CO₂ as possible.

TRAINING

All persons working with this product must 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 must be at least 14 inches by 16 inches in size and the letters must 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 must 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 Vessels

Purge storage vessel (bin, silo, or sealed railcar) to a minimum concentration of 60% atmosphere. Use a two-day treatment for killing adult insects and a four-day treatment for killing all life stages of insects. For specific flows to use, contact Linde LLC or a qualified fumigation engineer.

Trucks & Trailers

Treat as indicated above in Storage Vessels. Do not move truck or trailer during treatment. Trucks and trailers must be aerated before movement is allowed.

Shipboard, In transit 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.

Pre-fumigation Procedures

1. Prior to fumigating a vessel for in-transit 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 must insure that a qualified person using gas or vapor detection 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 must 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 is not aerated before the manned vessel leaves port, the person in charge of the vessel must ensure that at least two units of personal protection equipment, 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 for the fumigant means a supplied-air respirator with NIOSH approval number TC-19C or a self-contained breathing apparatus (SCBA) with NIOSH approval number TC-13F.

STORAGE AND DISPOSAL

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

PESTICIDE 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. Do not subject cylinders to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings,

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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.

PESTICIDE DISPOSAL: Vent unusable carbon dioxide to open air.

CONTAINER DISPOSAL: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Return empty cylinders for reuse and 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.

SPILL AND LEAK PROCEDURES

Evacuate immediate area of leak. Use respiratory device (see PRECAUTIONARY STATEMENTS) 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.