



ECO₂FUME[®] Fumigant Gas

DESCRIPTION

ECO₂FUME fumigant gas is a ready-to-use, non-flammable mixture of phosphine and carbon dioxide that enables highly effective fumigation in a wide variety of sealed-storage applications. It is dispensed external to storage or structures using simple techniques which avoids applicator exposure and enhances worker safety. ECO₂FUME fumigant gas can be transported easily and disperses and penetrates foods and non-foods quickly. Internal concentration levels of phosphine can be managed by adjusting the amount of fumigant released from the cylinder at any stage of the fumigation process. ECO₂FUME fumigant is quickly and easily aerated. It produces no waste by-products or dust residues, thus eliminating the hazardous deactivation and disposal issues typically associated with traditional fumigants.

TECHNICAL SPECIFICATIONS

Formulation of ECO₂FUME

- Phosphine (PH₃): 2% (by weight)/2.6% by volume
- Carbon Dioxide (CO₂): 98%

Packaging

- High-pressure steel cylinder
- Gross weight of full cylinder: 205-208 lbs.
- Gross weight of empty cylinder: 137-140 lbs.
- Net weight of ECO₂FUME fumigant gas per cylinder: 68 lbs. (1.34 lbs/620 grams PH₃)
- Cylinders are packaged in steel racks (16 cylinders per rack)
- Total weight of cylinders and rack: 3,640 lbs.
- Cylinder valve connection: CGA 350 (left-handed thread)
- Cylinder configuration: fitted with a "dip" tube
- Internal cylinder pressure: 838 psig@70°F.

Equipment

- Copper, stainless steel or hydraulic dispensing lines of suitable pressure rating*
- *Contact a Cytec technical representative for exact specifications.

Dispensing Rate

- 0.4 - >36 lbs./min. ECO₂FUME fumigant gas, or 3.6 - >320 grams phosphine/min.*
- *Cylinders can be manifolded together to achieve higher-end dispensing rates.

Fumigation Capabilities

- One (1) cylinder of ECO₂FUME gas is capable of fumigating 78,000 ft.³ (62,270 bushels).



APPROVED STORAGE AND APPLICATIONS

Storage

- Warehouses
 - Railcars, ship-holds, sea containers and trailers
 - Bins and silos
 - Tarps and bunkers
- Storage size limitations: none

Pests eliminated

- Weevils (Rice, Granary)
- Indian Meal Moth
- Lesser Grain Borer
- Grain Beetles (Rusty, Saw-Toothed, Merchant)
- Flour Beetles (Red, Confused)
- Cigarette Beetle
- Warehouse Moth
- Warehouse Beetle

Items protected

- Seed, flour, wheat, corn, rice and other grains
- Nuts, dried fruits, vegetables, cocoa and coffee beans
- Tobacco and other non-food commodities
- Processed foods
- Animal feed and feed ingredients

PRODUCT BENEFITS

Advantages of ECO₂FUME fumigant gas compared to traditional fumigants:

- Non-flammable
 - This eliminates spontaneous flammability associated with metal phosphides, which can cause fires within the fumigated space
- Fast-acting
 - Required concentration levels are achieved in hours, not days
- Easy application and control
 - ECO₂FUME fumigant gas is pre-mixed, and operators can easily vary concentration levels and exposure periods, ensuring elimination of all insect stages
- Enhanced worker safety
 - ECO₂FUME fumigant gas comes in ready-to-use cylinders that eliminate worker contact
- No waste generation or disposal
 - ECO₂FUME fumigant gas yields no waste by-products, and is residue free
- Environmentally friendly
 - Unlike alternatives, ECO₂FUME fumigant gas will not harm the ozone layer
- Cost-effective

Refer to Cytec's Material Safety Data Sheet, EPA approved product label and application manual for safe handling information

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