

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 avoid applicator exposure, eliminate confined space entry and enhance overall worker safety. ECO₂FUME fumigant gas 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. 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

ECO₂FUME Formulation

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

Packaging

- High-pressure steel cylinder
- Gross weight of full cylinder: 211-215 lbs. (96-98 kg)
- Gross weight of empty cylinder: 143-147 lbs. (65-67 kg)
- Net weight of ECO₂FUME fumigant gas per cylinder: 68.34 lbs./31kg. (1.34lbs/620 grams PH₃)
- ECO₂FUME fumigant gas cylinders are packaged in steel racks (16 cylinders per rack)
- Total weight of cylinders and rack: ~3,650 lbs.
- Cylinder valve connection: CGA 350 (left-handed thread)
- Cylinder configuration: fitted with a "dip" tube
- Internal cylinder pressure: 838 psig@70°F

Equipment

- Stainless steel or hydraulic dispensing lines of suitable pressure rating and materials of construction*
- Contact a Syensqo 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) ECO₂FUME cylinder is capable of fumigating up to 78,000 ft.³ (2,209 m³ or 62,680 bushels)

Approved Storage and Applications Include*

Storage

- Warehouses
- Railcars, ship-holds, sea containers and trailers
- Bins and silos
- Tarps and bunkers

Storage size limitations: none

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

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

* Refer to the approved application manual for a complete list of approved storage and applications and target pests.

Product Benefits

Advantages of ECO₂FUME fumigant gas compared to traditional fumigants include:

Non-flammable

- This eliminates spontaneous flammability associated with metal phosphides, which can cause fires within the fumigated space
- Nonreactive with moisture or water

Fast-acting

- Required concentration levels are achieved in hours, not days
- Only approved phosphine fumigant for 24 hour exposure time

Easy application and control

- ECO₂FUME is pre-mixed, and operators can easily vary concentration levels and exposure periods, ensuring elimination of all insect stages

Enhanced worker safety

- ECO₂FUME comes in ready-to-use cylinders that eliminate Worker contact. External applications eliminate confined space entry scenarios

No Waste generation or disposal

- ECO₂FUME yields no waste by-products, or dust residue that require retrieval and proper disposal

Environmentally friendly

- Unlike alternatives, ECO₂FUME Will not harm the ozone layer

Cost-effective

Safety Information

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

The Syensqo company issuing or distributing this document is doing so in its own name or on behalf of its affiliated companies (collectively, "Syensqo"). Syensqo declines any liability with respect to the use made by anyone of the information contained herein. The information contained herein represents Syensqo's best knowledge thereon without constituting any express or implied guarantee or warranty of any kind (including, but not limited to, regarding the accuracy, the completeness or relevance of the data set out herein). Nothing contained herein shall be construed as conferring any license or right under any patent or other intellectual property rights of Syensqo or of any third party.

The information relating to the products is given for information purposes only. No guarantee or warranty is provided that the product and/or information is adapted for any specific use, performance or result and that product and/or information do not infringe any Syensqo and/or third party intellectual property rights.

The user should perform its own tests to determine the suitability for a particular purpose. In using Syensqo's products, the user is reminded to comply with all relevant legal, administrative and regulatory requirements and procedures relating to their use and the protection of human health and the environment. The final choice of use of a product and/or information as well as the investigation of any possible violation of intellectual property rights of Syensqo and/or third parties remains the sole responsibility of the user.

All trademarks and registered trademarks are property of the companies that comprise the Syensqo or their respective owners. © 2024, Syensqo. All rights reserved. 1/2024