



DEGESCH AMERICA, INC.

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All Degesch America, Inc. metal phosphide fumigants are restricted use pesticides.

DEGESCH PHOSPHINE GENERATOR



SAFE

CLEAN

FAST

UNIQUE

INNOVATIVE

NEW
TECHNOLOGY



Degesch America, Inc. is committed to continue leading the way in the protection of the world's stored agricultural commodities. We strive to provide the highest quality products and services through innovative technology and dedicated personnel.

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egesch America, Inc. introduces its newest magnesium phosphide fumigant, Degesch Magtoxin® Granules and the Degesch Phosphine Generator

After considerable development work and field studies, Degesch America, Inc. is proud to announce its newest fumigant, Degesch Magtoxin® Granules which are intended for use only with the Degesch Generator. The Granules are a high assay magnesium phosphide product. When added to the Generator, the Granules produce phosphine gas at a very high rate and is then pumped into the storage to be fumigated.

Why is phosphine a good fumigant for control of insects in stored products?

Metal phosphide fumigants are solids and are a safe and convenient way to apply phosphine gas to stored products. Phosphine gas is effective across a very broad range of insect pests. It has about the same density as air and is not adsorbed very strongly by the treated commodity. Therefore, it will diffuse through the commodity faster than any other fumigant. Residues will not exceed food or feed tolerances if the fumigant is properly applied. Phosphine has excellent environmental properties in that it has a very short half life in the atmosphere and decomposes to innocuous products which are found in all living organisms. Spent or deactivated metal phosphide fumigants are not hazardous wastes.

There are a number of well-known metal phosphide products produced by Degesch. They are Degesch Prepac, Pellets and Tablets; Degesch Fumi-Cel® and Fumi-Strip® and now, Degesch Magtoxin® Granules which are intended only for use with the Degesch Generator.

What is the Degesch Phosphine Generator and how does it work?

The Degesch Phosphine Generator is a new device for the rapid production and introduction of phosphine gas into the stored commodity. The Generator is operated outside of the storage structure and the phosphine gas produced is pumped into the structure, either directly or through the Generator's self-contained recirculation system. The Generator can produce about 3500g of phosphine per hour.

The Generator is first flushed with a stream of carbon dioxide to remove air from its internal plumbing. The Granules are then added and are carried automatically to a water reaction chamber. The phosphine gas is then pumped into the storage site. Since the phosphine concentration is maintained below the lower explosion limit of 1.8% in air, there is no fire hazard.

The generator is operated by a touch screen computer board. Once programmed, the Generator will operate automatically, except for addition of the Granules, until the desired concentration has been achieved. The operator has the option of interrupting the program to pause or stop completely the production of phosphine. Valves and controls may be manually adjusted, as desired, at any time during the generation process.

What is needed on site to operate the Degesch Phosphine Generator?

A water supply and 110V electricity are required to operate the Generator along with a supply of bottled carbon dioxide. One 50 pound cylinder of carbon dioxide is sufficient for the generation of over 21 kg of phosphine.



What safety features have been incorporated into the Generator?

The Generator may only be operated by certified fumigators who have been specifically trained in use of this equipment.

The Generator will automatically stop production of phosphine gas if:

- there is an insufficient or excess flow of dilution air, water, or carbon dioxide.
- there is a malfunction in the power supply
- the temperature in the reaction chamber becomes too high

Should any of these scenarios develop, an audible alarm will sound.



What are some of the advantages of the Oegasch Phosphine Generator?

- worker exposure during application of phosphine is virtually eliminated.
- the rate of phosphine production and introduction into the storage is very rapid.
- no reentry into the structure is required to add additional phosphine to the storage.
- ambient temperature and humidity do not affect the phosphine generation rate.
- the fumigant is completely reacted and there is never a requirement for deactivation.
- there is no danger of fire.
- the waste is not hazardous
- only a small added volume of carbon dioxide is required to generate the phosphine.
- multiple fumigations can be conducted from a control location using a gas distribution manifold system.
- the Granules will release about 48 percent of their weight as phosphine, the highest percentage of any metal phosphide product on the market.

