



OMRI deems products to be "allowed" for use in the production of organic foods and include them on their OMRI Products List. Products that are OMRI Listed® are held in esteem and may be used in organic farming.

The success of the **PERMA-GUARD D-10** system of protecting grains or seeds from insect damage depends upon lightly coating the outside surface of substantially all kernels with this powder.

The most effective protection will be achieved if grain or seed are treated immediately after harvest. For best results, the moisture content of the grain or seed to be treated should be adjusted to no more than 12% by weight. After treatment the grain or seed should be stored in bulk at a temperature above that required to hatch insect eggs which may be present, for a period of time, to hatch all insect eggs on the grain or seed.

#### COMMERCIAL APPLICATIONS

Using standard milling equipment apply seven (7) pounds of this powder directly into each ton of clean, dry grain or seed to be treated and mix thoroughly.

A **PERMA-GUARD** dispenser consisting of a hopper and variable rate feeder may be used to apply the powder directly onto the grain either at the bottom of an elevator leg or as it is being moved into storage by auger or conveyor belt.

## Preparation For Home Storage

Apply one measuring cupful (2 1/2 ounces by weight) of this material to each 25 pounds of grain to be treated. Mix thoroughly. A pail or other container can be used for mixing. Place grain about three inches deep into container. Sprinkle light coating of this powder over the grain. Repeat process until container is almost filled with grain. Place lid on container. Roll or shake container until powder is thoroughly mixed with the grain. Make sure a very light coating of this powder covers surfaces of substantially all kernels. Pour treated grain into a clean, dry container for storage. An air tight seal will aid in keeping moisture out of the grain. Grain should be stored in a cool dry storage area.

Just one treatment will last for years and covers many types of insects.

When the grain is ready to be ground the DE may be removed but does not need to be. It is a food grade product. There will be no change in taste, texture of cooking qualities. You won't even know it's there.



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## Grain and Seed Storage Insecticide D-10



# Perma-Guard Grain and Seed Storage Insecticide D-10

## *Dehydration: Nature's Oldest Form of Insect Control*

There are no other ingredients in **Perma-Guard D-10 Grain and Seed Storage Insecticide** other than pure Diatomaceous Earth we use in **Perma-Guard** products.



## What is Diatomaceous earth?

**Diatomaceous Earth (DE)**, is composed of ground diatoms, microscopic fossils.

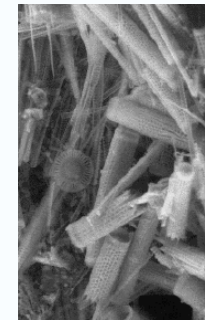
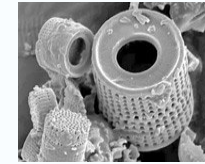
Diatoms are the tiny single-celled plants that live in both salt and fresh water by the billions. They form the foundation of the food-chain for all marine life. As diatoms die, their exoskeletons drift to the bottom of the ocean or lake bed, building up large deposits of diatomaceous earth over millennia. Geologic changes gradually shift these deposits to dry land making them accessible. Due to varying water currents, many deposits become impure and can often be dangerous.

**Perma-Guard™ DE**, used in

our Grain And Seed Storage D-10, comes from a pure **fresh-water** deposit that is **100% non-toxic** - no chemical additives.

It is non-calcined (not heat treated) . And the crystalline content is less than one half of one percent making our D-10 safe to use.

Diatomaceous earth is a desiccant. It works mechanically causing insects to die by dehydration. Insects can not build immunity to Diatomaceous earth.



Live Diatoms

- ◆ **INSECTS CAN NOT BECOME IMMUNE**
- ◆ **PROVIDES LONGTERM PROTECTION**
- ◆ **DOES NOT NEED TO BE REMOVED.**
- ◆ **LEAVES NO CHEMICAL RESIDUE.**
- ◆ **STAINLESS AND ODORLESS**
- ◆ **NON- COMBUSTIBLE.**
- ◆ **NON-EXPLOSIVE**

This material is an effective post-harvest additive to aid in the prevention of insect damage from Rice weevils, Lesser Grain Borers, Flat Grain Beetles, Merchant Grain Beetles, Saw Toothed Grain Beetles, Red Flour Beetles, Confused Flour Beetles, Granary Weevils, and larvae of the Indian Meal Moth to stored grains and seeds such as barley, buckwheat, corn, oats, rice, rye, sorghum (milo), sunflower seeds, and wheat. Grain treated with this material will have a slightly dusty appearance, movement speed will be reduced, test weight per bushel will be reduced about four pounds. Fewer kernels will flow into and occupy the same space as untreated grain.

**Results: more bushels of grain.**

The USDA states in the Grain Inspector's Manual that grain shown to include Diatomaceous earth as a protectant can not be down graded. The milling, baking, nutritive and germination qualities of grain or seed are not affected by this treatment.

