

PROTECT-IT®

Ready-to-Use Insecticidal Dust

For Insect Control in Stored Grain, Warehouses and Processing Facilities

COMMERCIAL - AGRICULTURAL  
READ THE LABEL BEFORE USING

GUARANTEE

Silicon Dioxide (Present as 100% Diatomaceous Earth)..... 74%  
Silica Aerogel..... 10%

REGISTRATION NO. 24259 PEST CONTROL PRODUCTS ACT

KEEP OUT OF REACH OF CHILDREN

NET CONTENTS 5.0 kg (contents may settle)

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Patent 2,149,164  
51-CAN

DIRECTIONS FOR USE

SAFETY AND MODE OF ACTION

Diatomaceous earth (DE) is formed with mineral skeletons of countless single-celled plankton called diatoms. DE is extremely stable and does not produce toxic chemical residues or react with other substances in the environment. The active substance is amorphous silicon dioxide which is registered as a food additive. DE is used in many commercial products. Protect-It® absorbs the cuticular lipid layer on the insect. With this protective layer corrupted, the insect is unable to retain moisture, and as a result the insect dies from dehydration. Optimum conditions are low grain moisture content and lower relative air humidities.

Protect-It® is approved for use on the following stored products: feed grains, seed, wheat, barley, buckwheat, corn, oats, rye, flax, peas, soybeans and sorghum. After storage, grain can be used as intended without removal of Protect-It®.

Protect-It® is approved for use for the following stored product insects: rusty grain beetle, rice weevil, granary weevil, Indian meal moth, Mediterranean flour moth, Angoumois grain moth, red flour beetle and Tribolium.

Protect-It® can be used in dry empty containers where grain is transported or stored, such as silos, grain elevators, food and/or feed processing facilities, rail cars, ships, trucks, trailers, as well as appropriate cans, drums and packages. The structure must remain empty for 1-2 weeks. For maximum effectiveness the relative humidity must remain below 55%, and the temperature above 15°C.

General, spot, and crack and crevice treatment: Protect-It® can be applied as a dust or in a slurry. As a dust Protect-It® is best used in dry, empty structures. Use a dust blower to place Protect-It® into the cracks and crevices of the structure. For treatment of surfaces, spot treatments, or exterior application, Protect-It® can be applied either as a dust so that residues are about 5 g/m<sup>2</sup>, or as a slurry application so that residues are about 7 g/m<sup>2</sup>. Surfaces include such areas as walls and floors, whereas spot treatments are areas smaller than about 1.5 – 2.0 m<sup>2</sup>. For applications as a slurry, thoroughly mix 1.4 kg of Protect-It® with 10 litres of water. Use 0.5 litres of mixture per 10 m<sup>2</sup>, or 5 litres per 100 m<sup>2</sup>, so that Protect-It® residues are 7 g/m<sup>2</sup>. For vertical surfaces, Protect-It® can be applied as a slurry so that residues are about 7 g/m<sup>2</sup>.

Treatment for stored grain: Protect-It® may be applied to grain at any stage of preparation or transportation after drying and cleaning, and prior to storage. Dust should be mixed thoroughly with all grain to be stored. Protect-It® may be applied to grain as it enters the auger or conveyor feeder system during transfer of grain into storage facilities or into transportation containers.

Commodity	Rate of Protect-It® per metric ton (g/tonne)		
		grain beetle	Other listed insects
Rusty Wheat	100	500	
Barley	150	500	
Oats, Buckwheat, Rye, Flax, Soybeans	500	500	
Feed grains, Seed, Corn, Sorghum		1000	1000

To control accessible stages of Indian meal moth, Mediterranean flour moth and Angoumois grain moth: Apply to surface of binned grain at the rate of 500 g/ 100 m<sup>2</sup>. Apply at monthly intervals with the first appearance of moths and continue until early fall. In severe infestations break up webbing with a rake before dusting and make second application within two weeks.

This product has been found to affect test weight and flowability of wheat and barley when treating stored grain (see table below). It is the responsibility of the owner of the grain to insure that the application of Protect-It<sup>®</sup> will not degrade the grain on account of test weight loss.

Average Test Weight Losses (kg/hl) for Three Commodities

Application rates of 0.1, 0.15 & 0.5 kg/tonne of grain (100, 150 & 500 ppm)

Commodity	Application Test Weight Reduction (kg/hl)		
	Method	100 ppm	150 ppm 500 ppm
Hard Red Spring Wheat (3% dockage)	dry	3.4	5.3
Durum Wheat (commercially cleaned)	dry	3.0	5.2
Barley (1.5% dockage)	dry		8.6

According to grain regulations visual detection of Protect-It<sup>®</sup> on grain will cause the grain to be down-graded to sample due to adhered foreign material. Under normal circumstances, Protect-It<sup>®</sup> is not visible on grain at concentrations up to 400 ppm. The Canadian Grain Commission recommends that wheat contains no more than 100 ppm Protect-It<sup>®</sup>. Wheat containing more than 100 ppm diatomaceous earth can be diluted by mixing with untreated wheat. Because the dehydration process progresses slowly, treated wheat should not be mixed with untreated wheat for 4 weeks after treatment with Protect-It<sup>®</sup>.

For use in Food and /or Feed Processing Facilities:

Apply only when plant is not in operation. Cover or remove all food processing equipment, packaging material and utensils before application. Wash all surfaces that may contact food and rinse with potable water before re-use.

**PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN**

Avoid contact with eyes. Use adequate ventilation and avoid breathing dust. Causes irritation and soreness in throat and nose in cases of extreme exposure. Some congestion may occur. Not hazardous when ingested. Wear a suitable dust mask approved by NIOSH/MSHA when handling. For applications to stored grain or when using a dust blower, wear a full-face NIOSH approved respirator during mixing, loading and application.

**FIRST AID:** If eye irritation occurs, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice. If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** Treat Symptomatically.

**DISPOSAL:** Thoroughly empty the contents of the container into the application device. Do not reuse container. Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make empty container unsuitable for use. Dispose of the container in accordance with provincial requirements. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory Agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills. **STORAGE:** Store in a cool and dry area.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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