

WEEVIL-CIDE® . CONTROL OF PESTS IN GRAIN, OTHER COMMODITIES AND RODENT BURROWS.

WEEVIL-CIDE® fumigant is a pesticide that controls insects in stored commodities and rodents in burrows when used at labeled rates. The quality and value of grains and other perishable commodities are dependent on sufficient pest control during storage. WEEVIL-CIDE protects this value.

WEEVIL-CIDE's active ingredient is aluminum phosphide. When exposed to air, the active ingredient combines with moisture in the air to generate phosphine gas. The phosphine gas is an effective method for the control of insects and burrowing pests in stored grains. Phosphine fumigation has been recognized worldwide as the most cost-effective method of control for grain pests, protecting thousands of tons of grain used for human consumption.

WEEVIL-CIDE IS THE NUMBER ONE PHOSPHINE GAS FUMIGANT USED WORLDWIDE

The phosphine gas generated from WEEVIL-CIDE is highly toxic to insects and burrowing pests. It must be properly applied in accordance with the label, as well as state and local regulations.

WEEVIL-CIDE is a registered restricted-use pesticide and subject to the rules and regulations of the U.S. Environmental Protection Agency. Before any handling or use of this product, it is required to read, understand and follow all directions noted on the label and in the applicator manual.

RESOURCES

The following resources are available in the WEEVIL-CIDE section of the UPL website, www.upl-ltd.com/us/product-details/weevil-cide:

- Product labels
- Safety Data Sheet (SDS)
- Applicator's manual (English and Spanish)
- Warning sign (for use during fumigation)
- Fumigation Management Plan template
- Burrowing pests guide

ACTIVE INGREDIENT

Aluminum Phosphide

FEATURES & BENEFITS

- **Versatile:** WEEVIL-CIDE can be used in practically all grains and many commodities.
- **Effective control:** WEEVIL-CIDE is highly effective against insects, mites and rodents.
- **Uniform distribution:** When used per labeled instructions, phosphine generated from WEEVIL-CIDE disperses uniformly in all directions within the treated area.
- **Controlled reaction:** Stabilizing ingredients in WEEVIL-CIDE moderate the generation of phosphine gas.
- **Non-toxic residue:** WEEVIL-CIDE does not affect the germination capacity of seeds, and it does not leave toxic residue after fumigation and aeration.
- **No application equipment required:** WEEVIL-CIDE tablets, pellets and permeable gas bags can be handled manually or with an automatic dispenser, directly from the packaging. Always use protective clothing and safety equipment.
- **Stability:** WEEVIL-CIDE tablets, pellets and gas bags remain intact when stored in the original packaging.

COMMODITIES THAT CAN BE TREATED

Animal feeds (including feed ingredients)

Grains (such as barley, corn, oats, popcorn, rice, rye, triticale and wheat)

Processed foods (such as coffee, flour, packaged foods, sugar and yeast)

Nuts (such as almonds, cashews, peanuts, pecans, pistachios and walnuts)

Raw Agricultural Commodities (such as cocoa beans, coffee beans, cottonseed, dates, filberts, grass seed, millet, safflower seed, seed & pod vegetables, sesame seed, sorghum, soybeans, sunflower seeds and vegetable seeds)

NON-FOOD COMMODITIES THAT CAN BE TREATED

Cloth and clothing

Dried plants and flowers

Feathers, straw and hay

Leather products

Paper and paper products

Seeds, wood and bamboo products

Tires (for mosquito control)

Tobacco

Other non-food commodities

PROCESSED FOODS THAT CAN BE TREATED

The listed processed foods may be fumigated with WEEVIL-CIDE. Under no condition shall any processed food or bagged commodity come in contact with WEEVIL-CIDE tablets, pellets or gas bags or residual dust except that WEEVIL-CIDE may be added directly to processed brewer's rice, malt and corn grits for use in the manufacture of beer.

Cereal flours and bakery mixes

Cereal foods

Cheese and cheese byproducts

Chocolate and chocolate products

Corn grits

Cured, dried and processed meat products and dried fish

Dates and figs

Dried eggs and egg yolk solids

Dried milk

Dried or dehydrated fruits

Dried vegetables

Malt

Processed candy and sugar

Processed cereals

Processed coffee

Processed herbs and spices

Processed nuts

Processed oats and oatmeal

Processed tea

Rice

Soybean flour

Wild rice

Yeast (including primary yeast)

Other processed foods

INSECTS CONTROLLED

WEEVIL-CIDE has been found to be effective against the following insects and their pre-adult stages — that is, eggs, larvae and pupae. These include:

| | |
|---------------------------------------------------------|--------------------------------------------------------------|
| Africanized bee & honeybees infested with tracheal mite | Hessian fly |
| Almond moth | Indian meal moth |
| Angoumois grain moth | Khapra beetle |
| Bean weevil | Lesser grain borer |
| Bee | Maize weevil |
| Cadelle | Mediterranean flour moth |
| Cereal leaf beetle | Pea weevil |
| Cigarette beetle | Pink bollworm |
| Confused flour beetle | Raisin moth |
| Dermestid beetle | Red flour beetle |
| Dried fruit beetle | Rice weevil |
| Dried fruit moth | Rusty grain beetle |
| European grain moth | Saw-toothed grain beetle |
| Flat grain beetle | Spider beetle |
| Fruit fly | Tobacco moth |
| Granary weevil | Yellow mealworm |
| Greater wax moth | |
| Hairy fungus beetle | <i>See product labels for full list of pests controlled.</i> |

PHYSICAL PROPERTIES OF WEEVIL-CIDE

Active ingredient content: aluminum phosphide, minimum 56%

| Characteristics | Tablets | Pellets |
|--------------------|-----------------|--------------------|
| Weights | 0.11 oz (3 g) | 0.02 oz (0.6 g) |
| Color | gray-green | gray-green |
| Diameter | 16 mm | 9 mm |
| Thickness | 12 mm | 6 mm |
| Odor | garlic | garlic |
| Phosphine quantity | 0.04 oz (1.0 g) | 0.0007 oz (0.02 g) |

VERTEBRATE PESTS CONTROLLED

- Chipmunks
- Ground squirrels
- Mice
- Moles
- Norway rats
- Pocket gophers
- Prairie dogs (except Utah prairie dogs, *Cynomys parvidens*)
- Roof rats
- Voles
- Woodchucks
- Yellow-bellied marmots (rock chucks)

PERMITTED FUMIGATION AREAS AND TYPES

- Vertical storage (such as silos, concrete bins, steel bins, tanks, etc.)
- Farm bins (Butler type)
- Bulk stored commodities in flat storage, bunkers, and commodities stored on the ground, loosely piled under gas-tight covering
- Packaged commodities (bagged grain, processed foods, etc.) in sealable enclosures
- Nuts, dates or dried fruit in storage boxes
- Nuts, dates or dried fruit in bulk
- Railcars, containers, trucks, vans and other transport vehicles
- Cereal mills, feed mills, food processing plants & warehouses for space fumigation
- Stored beehives, supers and other beekeeping equipment for wax moth control and Africanized honeybees with tracheal mites and foulbrood
- Barges
- Shipholds
- Small containers storing commodities
- Rodent burrows

Lower flammability limit for phosphine gas: 1.8% by volume of air WEEVIL-CIDE gas bags contain dry aluminum phosphate. Once removed from the sealed container, the permeability of the bags allows air and moisture to be in contact with the contained aluminum phosphide inside the bags, causing phosphine gas to be generated.

DOSAGE RATES

Phosphine is a mobile gas that will penetrate to all parts of the storage structure. Therefore, dosage must be based upon the total volume of the space being treated and not on the amount of commodity it contains. The same amount of WEEVIL-CIDE is required to treat a 30,000-bushel silo whether it is empty or full of grain unless, of course, a tarpaulin seals the surface of the commodity.

MAXIMUM ALLOWABLE DOSAGE FOR FUMIGATION WITH WEEVIL-CIDE

| Product | No. per 1,000 cu.ft.* | No. per 1,000 bu.* |
|----------|-----------------------|--------------------|
| Pellets | 725 | 900 |
| Tablets | 145 | 180 |
| Gas Bags | 13 | 16 |

*The maximum dosage allowed for dates and nuts is 4 bags per 1000 cu. ft.
The maximum dosage for dried fruits is 200 pellets, 40 tablets, 4 gas bags/1,000 cu. ft. (250 pellets, 50 tablets, 6 gas bags/1,000 bu).

The above dosages are not to be exceeded. It is important to be aware that a shortened exposure period cannot be fully compensated for with an increased dosage of aluminum phosphide. Consult the Applicator's Manual for dosage rate guidelines in various fumigated areas and situations. Do not exceed the maximum use rate prescribed.

EXPOSURE TIMES

The following table may be used as a guide in determining the minimum length of the exposure period at the indicated temperatures:

| Temperature | Pellets | Tablets | Gas Bags |
|---------------------|--------------------|---------------------|---------------------|
| Below 40 °F (5 °C) | Do not fumigate | Do not fumigate | Do not fumigate |
| 40–53 °F (5–12 °C) | 8 days (192 hours) | 10 days (240 hours) | 14 days (336 hours) |
| 54–59 °F (12–15 °C) | 4 days (96 hours) | 5 days (120 hours) | 9 days (216 hours) |
| 60–68 °F (16–20 °C) | 3 days (72 hours) | 4 days (96 hours) | 6 days (144 hours) |
| Above 68 °F (20 °C) | 2 days (48 hours) | 3 days (72 hours) | 4 days (96 hours) |
| Above 77 °F (25 °C) | N/A | N/A | 3 days (72 hours) |

See Applicator's Manual for additional information on exposure.

PACKAGING

UPL provides several packaging options to meet your fumigation needs.

| Type | Weight | Count | Container Type | Container New Weight | Container Per Case |
|--------------------|-----------------|--------|----------------|-------------------------------------|--------------------|
| Pellets* | 0.02 oz (0.6 g) | 2,500 | Aluminum flask | 3.1 lb (1.5 kg) per flask | 14 flasks |
| Pellets | 0.02 oz (0.6 g) | 1,660 | Aluminum flask | 2.21 lb (1.0 kg) per flask | 21 flasks |
| Tablets* | 0.11 oz (3.0 g) | 500 | Aluminum flask | 3.1 lb (1.5 kg) per flask | 14 flasks |
| Permeable Gas Bags | 1.2 oz (34 g) | 10–20 | Pouch | 0.01–0.02 oz (340–680 mg) per pouch | 21–42 pouches |
| Blankets | 1.2 oz (34 g) | 50–100 | Pouch | 7.5 lb (3.4 kg) per pouch | 4 blankets |

*Upgraded packaging is available on these configurations, allowing for DOT-compliant shipment of individual flasks.

To learn more about the WEEVIL-CIDE, talk to your UPL Fumigants representative or call **1-800-438-6071**.