



** BOOKLET**

GROUP 22 FUNGICIDE

INTEGO™ Solo Fungicide

COMMERCIAL

SUSPENSION

INTEGO Solo Fungicide is a seed treatment product providing systemic fungicide protection against certain seed and seedling diseases on labelled crops.

GUARANTEE:

Ethaboxam.....383 g/L

Contains 5-chloro-2-methyl-4-isothiazolin-3-one at 0.0006 % and 2-methyl-4-isothiazolin-3-one at 0.0002 % as a preservative

Or

Contains 1,2-benzisothiazolin-3-one at 0.019 % or at 0.046 % as a preservative

REGISTRATION NUMBER: 31324 PEST CONTROL PRODUCTS ACT

**READ THE LABEL AND BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN**

For use with closed transfer commercial seed treaters (facilities and mobile treaters). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment. Also for use in on-farm treatment of Crop Group 15: Cereal Grains (except corn, rice, sorghum and wild rice) and Crop Group 6: Legume Vegetables (succulent or dried) only with open or closed transfer equipment.

NET CONTENTS: 50 ml to Bulk

This product contains no colourant. An appropriate colourant must be added when the product is applied to seed, according to regulations pertaining to the "Seeds Act". A baby blue colourant must be added when this product is applied to canola/rapeseed. A red colourant must be added when product is applied to grain seed.

HEALTH EMERGENCY OR SPILL (24 hr): (800) 682-5368

TRANSPORTATION (24 hr.): CHEMTREC (800) 424-9300 or (202) 483-7616

GROWER INFORMATION:

Valent Canada, Inc.

3-728 Victoria Road South, Guelph, Ontario, N1L 1C6

Contact Phone Number: (519) 767-9262

www.valent.ca

For information on 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.

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.

FIRST AID:

IF SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF IN EYES: 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.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. Call a poison control center or doctor for treatment advice.

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

TOXICOLOGICAL INFORMATION:

Contains petroleum distillates. Vomiting may cause aspiration pneumonia. No specific antidote is available. Treat the patient symptomatically.

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Wash hands thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

User Safety Recommendations:

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product.
- Wash the outside of gloves before removing.
- As soon as possible, wash thoroughly and change into clean clothing.

Do not apply in a way that this product will contact workers or other persons, either directly or through drift.

A closed cab tractor is required when planting treated seed.

Commercial seed treatment facilities:

Wear a long-sleeved shirt, long pants, chemical resistant gloves, socks and shoes or boots during mixing, loading and application. In addition, wear chemical-resistant coveralls during clean-up, maintenance and repair. Wear a long-sleeved shirt, long pants, gloves, socks and shoes or boots during bagging, sewing, stacking or other activities not involving direct contact with treated seed.

On-Farm Seed Treatment:

Wear a long-sleeved shirt, long pants, chemical resistant gloves, socks and shoes or boots during mixing, loading, application, clean-up and repair and during planting. A long-sleeved work jacket is also required during planting activities.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Always read and follow all tank mix partner's labels directions for use, restrictions and precautions.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., contact Valent Canada, Inc

ENVIRONMENTAL HAZARDS:

Toxic to aquatic organisms.

Treated seed is toxic to birds and small, wild mammals.

Toxic to birds and small, wild mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

USE RESTRICTIONS:

- Do not use treated seed for food, feed, or oil processing.
- Due to seed quality conditions beyond the control of Valent Canada, Inc., no claims are made to guarantee germination of carry-over seed.
- For use with closed transfer commercial seed treaters (facilities and mobile treaters). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment.
- For use in on-farm treatment of Crop Group 15: Cereal Grains (except corn, rice, sorghum and wild rice) and Crop Group 6: Legume Vegetables (succulent or dried) only with open or closed transfer equipment.

LABELLING OF TREATED SEED:

All bags containing treated seed must be labeled or tagged as follows:

- This seed was treated with a product containing the active ingredient ethaboxam.
- Do not use treated seed for feed, food or oil processing.
- Store away from feeds and other foodstuffs.
- Wear long-sleeved jacket, long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes when handling treated seed.
- A closed cab tractor is required when planting treated seed.

- This product is toxic to aquatic invertebrates, oysters and shrimp.
- Dispose of all excess treated seed. Left over treated seed may be double-sown around the headland or buried away from water sources in accordance with local requirements.
- Dispose of seed packaging in accordance with local requirements.
- Cover or incorporate spilled treated seeds.
- Toxic to birds and small, wild mammals. Any spilled or exposed seeds must be incorporated into the soil or otherwise cleaned-up from the soil surface.

STORAGE:

To prevent contamination store this product away from food or feed.

Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures.

DISPOSAL:

RECYCLABLE CONTAINER:

DO NOT reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

RETURNABLE CONTAINER:

DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

REFILLABLE CONTAINER:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For information on 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.

NON-RECYCLABLE/RETURNABLE/REFILLABLE CONTAINER:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

MODE OF ACTION:

INTEGO Solo Fungicide contains ethaboxam, which is a Group 22 fungicide as classified by the Fungicide Resistance Action Committee (FRAC). Its mode of action is the inhibition of cell division.

GENERAL INFORMATION:

INTEGO Solo Fungicide is a systemic fungicide seed protection product for use on listed crops. The active ingredient, ethaboxam, provides protection against the Oomycete class of water moulds. *INTEGO Solo* Fungicide controls seed rot/pre-emergence damping-off caused by *Pythium* spp., early-season root rot caused by *Phytophthora sojae* and seed-borne downy mildew caused by *Plasmopara halstedii*; and suppresses early-season root rot caused by *Aphanomyces euteiches*. For best results, use *INTEGO Solo* Fungicide combined with other Oomycete-active seed treatment fungicides, such as metalaxyl, to broaden the spectrum of activity. It is also recommended that *INTEGO Solo* Fungicide be used in combination with a broad-spectrum registered seed treatment fungicide having activity against *Rhizoctonia solani* and other fungal pathogens inciting seed and seedling disease. Fungicide combinations applied to seed offer a wider spectrum of activity against seed and seedling diseases impacting plant stand establishment and seedling health.

DIRECTIONS FOR USE:

INTEGO Solo Fungicide product contains no colourant. An appropriate colourant must be added when this product is applied according to regulations pertaining to the “Seeds Act”. A baby blue colourant must be added when this product is applied to canola/rapeseed. A red colourant must be added when this product is applied to grain.

Calibrate seed treatment equipment prior to application of *INTEGO Solo* Fungicide to assure proper application rate is achieved. Consult with the seed treatment equipment manufacturer for guidance on the operation and proper calibration of the treating equipment, as non-uniform, inaccurate seed coverage may result in suboptimal insect or disease protection.

RECOMMENDED APPLICATION

| Crop Group 15: Cereal Grains (except rice, sorghum and wild rice) | |
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| Barley; buckwheat; millet, pearl; millet, proso; oats; rye; teosinte; triticale; wheat | |
| Diseases Controlled | Application Rate of INTEGO Solo Fungicide (mL per 100 KG seed) |
| Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp. | 13 – 17 mL (5-6.5 g ai/100 kg seed) To deliver 5 g ai/100 kg seed, apply 0.44 mL per 100,000 seed (equals 0.0017 mg ai/seed) based on 28,634 seed/kg (13,000 seed/lb) count |
| Corn (sweet and field); popcorn | |
| Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp. | 13 – 19.6 mL (5-7.5 g ai/100 kg seed) Field Corn: To deliver 5 g ai/100 kg seed, apply 3 mL |

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| | <p>per 80,000 seed (equals 0.0141 mg ai/seed) based on 3524 seed/kg (1600 seed/lb) count</p> <p>Sweet Corn: To deliver 5 g ai/100 kg seed, apply 2 mL per 100,000 seed (equals 0.0072 mg ai/seed) based on 6938 seed/kg (3150 seed/lb) count</p> <p>Popcorn: To deliver 5 g ai/100 kg seed, apply 2 mL per 100,000 seed (equals 0.0074 mg ai/seed) based on 6742 seed/kg (3061 seed/lb) count</p> |
| <p>Crop Group 6: Legume Vegetables (succulent or dried)</p> <p>Bean (<i>Lupinus</i>) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (<i>Phaseolus</i>) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (<i>Vigna</i>) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (<i>Fava</i>); chickpea (garbanzo); guar; jackbean; lablab bean; lentil; pea (<i>Pisum</i>) (includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea); pigeon pea; soybean; soybean (immature seed); sword bean</p> | |
| | <p>Application Rate of INTEGO Solo Fungicide (mL per 100 KG seed)</p> |
| <p>Diseases Controlled</p> | <p>19.6-39.1 mL (7.5-15 g ai/100 kg seed)</p> |
| <p>Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp.</p> <p>Early season root rot caused by <i>Phytophthora sojae</i></p> <p>Early season root rot caused by <i>Aphanomyces euteiches</i> (suppression only)</p> | <p>Soybean: To deliver 7.5 g ai/100 kg seed, apply 4.4 mL per 140,000 seed (equals 0.0121 mg ai/seed) based on 6167 seed/kg (2800 seed/lb) count</p> <p>Bean: To deliver 7.5 g ai/100 kg seed, apply 5.5 mL per 100,000 seed (equals 0.0212 mg ai/seed) based on 3524 seed/kg (1600 seed/lb) count</p> <p>Pea: To deliver 7.5 g ai/100 kg seed, apply 2.8 mL per 100,000 seed (equals 0.0106 mg ai/seed) based on 7007 seed/kg (3181 seed/lb) count</p> |
| <p>Crop Group 20A (Rapeseed Subgroup)</p> <p>Rapeseed, Canola Varieties Only: Borage; carinata; crambe; cuphea; echium; flax seed; gold of pleasure; hare's ear mustard; lesquerella; lunaria; meadowfoam; milkweed; mustard seed; oil radish; poppy seed; rapeseed (including canola); sesame; sweet rocket; cultivars, varieties, and/or hybrids of these</p> | |
| | <p>Application Rate of INTEGO Solo Fungicide (mL per 100 KG seed)</p> |
| <p>Diseases Controlled</p> | <p>13 – 19.6 mL (5-7.5 g ai/100 kg seed)</p> |
| <p>Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp.</p> | |

| Crop Group 20B (Sunflower Subgroup) Calendula, Castor oil plant, Euphorbia, Evening Primrose, Niger seed, Rose hip, Safflower, Stokes aster, Sunflower; cultivars, varieties, and/or hybrids of these | |
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| Diseases Controlled | Application Rate of INTEGO Solo Fungicide |
| Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp. | 0.1 to 0.15 mg ai/seed (equivalent to 154-231 g ai/100 kg or 402 to 603 mL product per 100 kg seed based on seed count of 15,400 seeds/kg) |
| Seed-borne downy mildew (<i>Plasmopora halstedii</i>) | |

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

SEED QUALITY AND STORAGE OF TREATED SEED

- Laboratory and field studies have shown that *INTEGO Solo* Fungicide applied to seed will not adversely affect germination.
- Due to seed quality conditions beyond the control of Valent Canada, Inc., no claims are made to guarantee germination of carry-over seed. Treatment of mechanically scarred or damaged seed, or of seed known to be of low germ, low vigour and poor quality is not recommended.
- Treatment of highly mechanically damaged seed, or seed of known low vigor and poor quality, may result in reduced germination and/or reduction of seed and seedling vigor. Treat and conduct germination tests on a small portion of seed before committing the total seed lot to a selected chemical treatment. Due to seed quality conditions beyond the control of Valent Canada, Inc., no claims are made to guarantee germination of carry-over seed.

SEEDING EQUIPMENT:

INTEGO Solo Fungicide-treated seeds may not flow through seeding equipment at the same rate as other wheat seed treatment products or untreated seed. Re-calibration of seeding equipment is recommended before planting seed treated with *INTEGO Solo* Fungicide to ensure proper planting rate in the field.

RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, *INTEGO Solo* Fungicide contains a Group 22 fungicide. Any fungal population may contain individuals naturally resistant to *INTEGO Solo* Fungicide and other Group 22 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Where possible, rotate the use of INTEGO Solo Fungicide with different chemical groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group that is effective on the target pathogen when such use is permitted.
- Fungicide use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development. Notify Valent Canada if reduced sensitivity of the pathogen to INTEGO Solo Fungicide is suspected. Use tank mixtures with fungicide from a different group that is effective on the target pathogen when such use is permitted. If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different site of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.

For further information and to report suspected resistance, contact Valent Canada, Inc. at 1-800-682-5368.

INTEGO is a trademark of Valent U.S.A. Corporation