

2023-0110
2023-09-07



	4, 7,	
GROUP	11, 22	FUNGICIDE

Zeltera® Pulse

SEED TREATMENT FUNGICIDE

SUSPENSION

COMMERCIAL

A fungicide seed treatment product providing contact and systemic control or suppression of labeled seed and seedling diseases.

An INDIFLIN® brand

ACTIVE INGREDIENTS:

Ethaboxam.....	23.9 g/L
Inpyrfluxam.....	15.9 g/L
Mandestrobin.....	31.7 g/L
Metalaxyl.....	12.7 g/L

Contains 1,2-benzisothiazolin-3-one at 0.044% as a preservative



REGISTRATION NUMBER 34329 PEST CONTROL PRODUCTS ACT

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

NET CONTENTS: 313 mL to bulk

For use with closed transfer commercial seed treaters (facilities and mobile treaters). Closed transfer includes closed mixing, loading, calibrating and closed treatment equipment.

On-farm treatment (open transfer, including mixing, loading, calibrating, and open treatment equipment) is permitted.

This product contains red colourant for application to Crop Group 6 – Legume Vegetables, according to regulations pertaining to the “Seeds Act”.

Valent Canada, Inc.
201-230 Hanlon Creek Blvd., Guelph, Ontario, N1C 0A1
Contact Phone Number: (519) 767-9262

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.

PRECAUTIONS:

KEEP OUT OF THE REACH OF CHILDREN. Harmful if swallowed.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/personal protective equipment (PPE) 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.

Apply only in a way that this product will not contact workers or other persons, either directly or through drift. Only workers wearing the personal protective equipment may be in the area where treating, bagging, sewing and/or stacking is occurring.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Scenario	Tasks	PPE/Engineering Controls
For Commercial Seed Treatment (including mobile treaters)	Closed transfer system only	Closed transfer includes closed mixing, loading, calibrating, and closed treatment equipment. No open transfer of seed treatment product is permitted in commercial seed treatment facilities.
	Treating Clean-up, maintenance and repair activities	During mixing, loading, treating, calibrating, bagging, sewing, stacking, cleaning, maintenance and repair activities, wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. In addition, when bagging or sewing bags of treated seeds or when transferring seeds to a storage bin, workers must wear a NIOSH-approved N95 (minimum) filtering face piece respirator (dust mask) that is properly fit tested.
For On-Farm Seed Treatment	Treating with an open or closed transfer system	During mixing, loading, treating, calibrating, clean-up, repair and any other activities involving handling treated seeds, wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes.
	Clean-up and repair activities	
For Handling and Planting Treated Seeds	Handling treated seeds and planting with a closed-cab tractor only	When handling and planting treated seeds, wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. A closed cab tractor is required when planting treated seed. Gloves are not required within

		the closed cab.
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Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Read the label directions for each tank mix product and follow the most restrictive label precautions and limitations.

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.

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 centre or doctor for treatment advice.

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

<p><i>IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL OR POISONING CALL 1-800-682-5368</i></p>
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TOXICOLOGICAL INFORMATION:

No specific antidote is available. Treat the patient symptomatically.

ENVIRONMENTAL PRECAUTIONS:

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

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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.

LABELLING OF TREATED SEED:

All containers and packages containing treated seed for sale or use in Canada must be labeled or tagged as follows:

- This seed was treated with a product containing the active ingredients ethaboxam, inpyrfluxam, mandestrobin, and metalaxyl.
- Do not use treated seed for feed, food or oil processing.
- Store away from feeds and other foodstuffs.
- Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes when handling and planting treated seeds. A closed cab tractor is required when planting treated seeds. Gloves are not required within a closed-cab tractor.
- 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.
- 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.
- **KEEP TREATED SEED OUT OF REACH OF CHILDREN AND ANIMALS.**
- **DO NOT** plant by hand.

MODE OF ACTION

Zeltera Pulse contains the active ingredients ethaboxam, inpyrfluxam, mandestrobin, and metalaxyl. Ethaboxam is a Group 22 fungicide as classified by the Fungicide Resistance Action Committee (FRAC); it's mode of action is the inhibition of cell division. Inpyrfluxam belongs to the succinate dehydrogenase inhibitor (SDHI) group of fungicide (Group 7); it acts by inhibiting succinate dehydrogenase, a key enzyme in the fungal respiration chain. Mandestrobin belongs to the strobilurin or Quinone Outside Inhibitors (QoI) class of fungicides (Group 11). Metalaxyl is a member of the acylalanine chemical group (Group 4) and interrupts fungal nucleic acid synthesis.

SEED QUALITY AND STORAGE OF TREATED SEED:

Use proper storage conditions for treated seed. Due to seed quality and seed storage conditions beyond the control of Valent Canada, Inc., no claims are made to guarantee the germination of carry-over treated seed.

GENERAL INFORMATION:

Zeltera Pulse (containing ethaboxam, metalaxyl, inpyrfluxam and mandestrobin) is a fungicide seed treatment product offering both contact and systemic activity in providing broad-spectrum seed and seedling protection against labeled seedling diseases. 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:

Zeltera Pulse must be used only in accordance with use instructions on this label utilizing standard mechanical or slurry seed treating equipment that is calibrated to accurately and uniformly apply the

product to seed. This product is for both commercial and on-farm application. Do not apply this product in a hopper-box or planter-box at planting time. Always mix product thoroughly before use.

Tank mixing

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Valent Canada, Inc. at 519-767-9262 for information before applying any tank mix that is not specifically recommended on this label.

Pre-test tank mixtures with other seed treatment products to evaluate formulation compatibility and to ensure proper physical compatibility of products.

Calibrate seed treatment equipment prior to application of *Zeltera* Pulse 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 disease protection.

Accurate application of *Zeltera* Pulse to seed is required for best performance. Thoroughly shake product before opening container. Thoroughly mix *Zeltera* Pulse in the desired seed slurry mixture, if necessary, prior to application to seed.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

The following tables provide use rates of *Zeltera* Pulse by labeled crop, with disease protection guidelines.

Crop Group 6: Legume Vegetables (Succulent or Dried, except soybeans)	
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 (immature seed); sword bean	
DISEASE CLAIMS	APPLICATION RATE
For control of: Seed rots, seedling blight and seedling root	313 mL/100 kg seed (Ethaboxam – 7.5 g a.i./100 kg seed) (Inpyrfluxam – 5 g a.i./100 kg seed)

<p>rot caused by <i>Rhizoctonia solani</i> and <i>Fusarium</i> spp. (including but not limited to <i>F. avenaceum</i>, <i>F. solani</i>, and <i>F. oxysporum</i>)</p> <p>Pre-emergence damping-off, post-emergence damping-off caused by <i>Rhizoctonia solani</i></p> <p>Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp., including control of metalaxyl-resistant <i>Pythium</i> spp.</p> <p>For suppression of:</p> <p>Seed rots, seedling blight and seedling root rot caused by <i>Phomopsis longicolla</i></p> <p>Early season root rot caused by <i>Aphanomyces euteiches</i></p> <p>Seedling blight caused by seed-borne <i>Ascochyta</i> spp.</p> <p>Seed rot and seedling blight caused by seed-borne <i>Botrytis cinerea</i></p> <p>Seedling blight caused by seed-borne <i>Sclerotinia sclerotiorum</i></p> <p>Seed rot and seedling blight caused by seed-borne Anthracnose (<i>Colletotrichum lindemuthianum</i> and <i>C. truncatum</i>)</p>	<p>(Mandestrobin - 10 g a.i./100 kg seed) (Metalaxyl – 4 g a.i./100 kg seed)</p>
<p><i>ZELTERA</i> Pulse may be tank mixed with a labelled rate of an insecticide seed treatment for control of insect pests. Follow the most conservative use precautions of all tank mix partners.</p>	

SOYBEAN	
DISEASE CLAIMS	APPLICATION RATE
<p>For control of:</p> <p>Seed rots, seedling blight and seedling root rot caused by <i>Rhizoctonia solani</i>, and <i>Fusarium</i> spp.</p>	<p>313 mL/100 kg seed (Ethaboxam – 7.5 g a.i./100 kg seed) (Inpyrfluxam – 5 g a.i./100 kg seed) (Mandestrobin - 10 g a.i./100 kg seed) (Metalaxyl – 4 g a.i./100 kg seed)</p>

<p>Pre-emergence damping-off, post-emergence damping-off caused by <i>Rhizoctonia solani</i></p> <p>Seed rot/pre-emergence damping-off caused by <i>Pythium</i> spp. including control of metalaxyl-resistant <i>Pythium</i> spp.</p> <p>Early season root rot caused by <i>Phytophthora sojae</i></p> <p>For suppression of:</p> <p>Seed rots, seedling blight and seedling root rot caused by <i>Phomopsis longicolla</i></p> <p>Seedling blight caused by seed-borne <i>Sclerotinia sclerotiorum</i></p> <p>Seed rot and seedling blight caused by seed-borne Anthracnose (<i>Colletotrichum lindemuthianum</i>)</p>	
<p>ZELTERA Pulse may be tank mixed with a labelled rate of an insecticide seed treatment for control of insect pests. Follow the most conservative use precautions of all tank mix partners.</p> <p>In soybean, it is acceptable to apply foliar applications of Excalia Fungicide, also containing inpyrfluxam, following the use of Zeltera Pulse. Regardless of application method, do not apply more than 180 g a.i./ha of inpyrfluxam per year.</p>	

RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, please note that *Zeltera Pulse* contains Group 4, 7, 11, and 22 fungicides. Any fungal population may contain individuals naturally resistant to *Zeltera Pulse* and other Group 4, 7, 11, and 22 fungicides. A gradual or total loss of pest control may occur over time if this fungicide is 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 *Zeltera Pulse* with different chemical groups that control the same pathogens.
- Use tank mixtures with fungicides 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.
- Where possible, make use of predictive disease models to effectively time fungicide applications.
- Monitor treated fungal populations for resistance development. Notify Valent Canada, Inc. if reduced sensitivity of the pathogen to *Zeltera* Pulse is suspected. 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 the specific site and pest problems in your area.

Due to the minimal amount of *Zeltera* Pulse applied to the seed that relocates to the upper parts of the plant and the multiple modes of action, the potential for development of resistance is extremely low. Seed treatments of *Zeltera* Pulse can therefore be followed by foliar use fungicides containing the same modes of action in accordance with resistance management guidelines as specified on the respective labels.

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

STORAGE:

Keep pesticide in its original container. Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures, do not freeze. Store this product away from food or feed.

DISPOSAL:

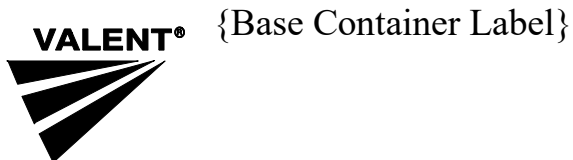
For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

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.

Zeltera[®] and **INDIFLIN**[®] are registered trademarks of Sumitomo Chemical Company, Ltd.



GROUP	4, 7, 11, 22	FUNGICIDE
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Zeltera® Pulse

SEED TREATMENT FUNGICIDE

SUSPENSION COMMERCIAL

ACTIVE INGREDIENTS:

Ethaboxam.....	23.9 g/L
Inpyrfluxam.....	15.9 g/L
Mandestrobin.....	31.7 g/L
Metalaxyl.....	12.7 g/L

Contains 1,2-benzisothiazolin-3-one at 0.044% as a preservative



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

NET CONTENTS: 313 mL to bulk

Valent Canada, Inc.
201-230 Hanlon Creek Blvd., Guelph, Ontario, N1C 0A1
Contact Phone Number: (519) 767-9262

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FIRST AID:

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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:

No specific antidote is available. Treat the patient symptomatically.

PRECAUTIONS:

KEEP OUT OF THE REACH OF CHILDREN. Harmful if swallowed.

ENVIRONMENTAL PRECAUTIONS:

Toxic to aquatic organisms, birds, small wild mammals and non-target terrestrial plants.

STORAGE:

Keep pesticide in its original container. Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures. Store this product away from food or feed.

DISPOSAL:

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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.

See full booklet label for further restrictions and precautions.

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