Page 1

(Container Label)



**GROUP** 4 INSECTICIDE

# **Lumisure**™ **Insecticide Seed Treatment**

Lumisure™ is a systemic insecticide seed treatment for use on corn for the control of listed insect pests.

**COMMERCIAL** 

ACTIVE INGREDIENT: Clothianidin .......600 g/L suspension

Contains 1,2-benzisothiazolin-3-one at 0.04%, 5-chloro-2-methyl-4-isothiazolin-3-one at 0.001% and 2-methyl-4-isothiazolin-3-one at 0.0004% as preservatives.

Contains 5-chloro-2-methyl-4-isothiazolin-3-one at 0.0006% and 2-methyl-4-isothiazolin-3-one at 0.00019% as preservatives OR Contains 5-chloro-2-methyl-4-isothiazolin-3-one at 0.0017% and 2-methyl-4-isothiazolin-3-one at 0.0006% as preservatives. OR

Contains 1,2-benzisothiazolin-3-one as a preservative at 0.0483%

# **REGISTRATION NO 34573 PEST CONTROL PRODUCTS ACT**

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



**NET CONTENTS**: 20 - 1200 L

This product contains no colourant. An appropriate colourant must be added when this product is applied. Regulations pertaining to the "SEEDS ACT" must be strictly adhered to when using this product.

For use with commercial seed treaters (facilities and mobile treaters) with closed transfer including closed mixing, loading, calibrating, and closed treatment equipment only. No open transfer of Lumisure.

# Corteva Agriscience Canada Company Suite 240, 115 Quarry Park Rd. SE Calgary, AB

T2C 5G9

1-800-667-3852

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-12-10 Page 2

#### **PRECAUTIONS**

# **KEEP OUT OF REACH OF CHILDREN**

Harmful or fatal if swallowed. Harmful if absorbed through skin. Avoid contact with skin or clothing. Wash hands thoroughly with soap and water after handling.

Remove contaminated clothing and wash before reuse.

# **Seed Treatment Workers**

Workers mixing, loading, treating or maintaining and repairing seed treatment equipment, bagging, sewing or stacking treated seed must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, head gear, and respiratory protection (i.e., NIOSH - approved dust-filtering respirator or fresh air hood) and socks and shoes.

While cleaning treating equipment workers must wear chemical resistant coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, head gear, and respiratory protection (i.e., NIOSH - approved dust-filtering respirator or fresh air hood) and socks and shoes.

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

#### **FIRST AID**

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

**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 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.

**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 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.

**TOXICOLOGICAL INFORMATION:** No specific antidote is available. Treat the patient symptomatically.

# **ENVIRONMENTAL PRECAUTIONS**

- When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn seed treated with these insecticides. Carefully follow use directions for this seed flow lubricant.
- Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
- When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
- Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.
- Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatments. When used according to label directions minimal exposure or risk is expected.
- Toxic to aquatic organisms. Treated seed is toxic to birds and small wild mammals.

- To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate
  to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination
  of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the
  treated area and the edge of the water body.
- The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.
- 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.

# STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal, or by cleaning of equipment.

#### **STORAGE**

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

# CONTAINER 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 CONTAINERS**

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

- 1. After use, return the container to the point of purchase or designated locations.
- 2. This container must only be refilled with Lumisure at designated locations.
- 3. Do not reuse container for other purposes.
- 4. Prior to refilling inspect thoroughly for damage.
- 5. Check for leaks after refilling and before transportation.
- 6. Do not refill or transport damaged or leaking containers.
- 7. If the container is not being refilled, return to the point of purchase.

#### 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.

# **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.

Page 5 (Booklet)



# GROUP 4 INSECTICIDE

# Lumisure™ Insecticide Seed Treatment

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**COMMERCIAL** 

**ACTIVE INGREDIENT:** Clothianidin .......600 g/L suspension

Contains 1,2-benzisothiazolin-3-one at 0.04%, 5-chloro-2-methyl-4-isothiazolin-3-one at 0.001% and 2-methyl-4-isothiazolin-3-one at 0.0004% as preservatives.

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For use with commercial seed treaters (facilities and mobile treaters) with closed transfer including closed mixing, loading, calibrating, and closed treatment equipment only. No open transfer of Lumisure.

# **Corteva Agriscience Canada Company**

Suite 240, 115 Quarry Park Rd. SE Calgary, AB T2C 5G9 1-800-667-3852

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2023-12-18 Page 6

#### **PRECAUTIONS**

#### **KEEP OUT OF REACH OF CHILDREN**

Harmful or fatal if swallowed. Harmful if absorbed through skin. Avoid contact with skin or clothing. Wash hands thoroughly with soap and water after handling.

Remove contaminated clothing and wash before reuse.

#### **Seed Treatment Workers**

Workers mixing, loading, treating or maintaining and repairing seed treatment equipment, bagging, sewing or stacking treated seed must wear coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, head gear, and respiratory protection (i.e., NIOSH - approved dust-filtering respirator or fresh air hood) and socks and shoes.

While cleaning treating equipment workers must wear chemical resistant coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, head gear, and respiratory protection (i.e., NIOSH - approved dust-filtering respirator or fresh air hood) and socks and shoes.

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

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**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.

**TOXICOLOGICAL INFORMATION:** No specific antidote is available. Treat the patient symptomatically.

# **ENVIRONMENTAL PRECAUTIONS**

- Clothianidin is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
- To help minimize the dust generated during planting, refer to the complete guidance "Pollinator Protection and Responsible Use of Treated Seed- Best Management Practices" on the Health Canada webpage on pollinator protection at www.canada.ca/pollinators
- When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn seed treated with these insecticides. Carefully follow use directions for this seed flow lubricant.
- Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
- When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.

- Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.
- Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatments. When used according to label directions minimal exposure or risk is expected.
- Toxic to aquatic organisms. Treated seed is toxic to birds and small wild mammals.
- To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.
- The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.
- 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.

#### **USE RESTRICTIONS**

- Do not use treated seed for food, feed, or oil processing.
- Due to seed quality conditions beyond the control of Corteva Agriscience Canada Company, no claims are made to guarantee germination of carry-over seed.

# **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 clothianidin.
- Do not use for feed, food or oil processing.
- Store away from feeds and other foodstuffs.
- Wear long-sleeved shirt, long pants and chemical-resistant gloves when handling treated seed.
- This product is toxic to aquatic invertebrates.
- 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.

All treated corn seed for sale or use in Canada must also be labeled with the following information:

- Clothianidin is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
- To help minimize the dust generated during planting, refer to the complete guidance "Pollinator Protection and Responsible Use of Treated Seed- Best Management Practices" on the Health Canada webpage on pollinator protection at www.canada.ca/pollinators.
- When using a seed flow lubricant with this treated seed, only a dust reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for corn seed treated with these insecticides. Carefully follow use directions for this seed flow lubricant.
- Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
- When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
- Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.

# **DIRECTIONS FOR USE**

Lumisure is a systemic insecticide seed treatment for use on corn for the control of listed insects, and for control of listed pests.

For use in commercially available equipment designed for seed treatment only. Not for use in hopper-box, slurry-box, or similar seed treatment applications used at planting. This product is to be used in liquid or slurry treaters. Mix thoroughly before use or use entire container at one time.

#### **APPLICATION INSTRUCTIONS**

CROP	PEST	RATE OF LUMISURE		REMARKS
		mg Al/kernal	per 80,000 unit of seed	
Corn, field	Corn flea beetle Cutworm, black Seedcorn maggot Wireworm	0.25-0.5	33.3-66.6 mL	
	White grub (larvae of European Chafer, May/June beetle, Japanese beetle)	0.25	33.3 mL	
Corn (including sweet, and pop)	Corn rootworm (including Northern, Western)	1.25	166.7 mL	The application rate for control of corn rootworm also provides control of other listed corn pests.  If corn rootworm is not a target pest, use appropriate lower application rates for control of other listed corn pests.
	Corn flea beetle Cutworm, black Seedcorn maggot Wireworm	0.25 – 0.5	33.3 – 66.6 mL	
	White grub (larvae of European Chafer, May/June beetle, Japanese beetle)	0.25	33.3 mL	

Do not make any subsequent application of a Group 4 Insecticide (i.e., in-furrow or foliar application) following treatment with Lumisure.

In preparing a mixture of Lumisure for application to seed, measure proper volume of Lumisure along with other seed treatment additives (i.e., seed colourant, registered seed treatments whose labels also allow tank mixing). Triple rinsate from the product container should be incorporated into the mixture and calculated into the total volume recommended for seed volume.

When adding rinsate from triple rinsing the container for disposal, it is recommended to use 2% of the container size 3 times to triple rinse.

Add the appropriate volume of rinse water to the container and swish the contents thoroughly. Empty the rinsate into the seed treater holding tank and repeat this process two more times making sure the total volume of rinsate does not exceed 6% of the container size. Make sure rinsate is thoroughly mixed with seed treatment before treating. CAUTION: DO NOT dilute with rinsate over 6% the total slurry volume. Excess seed wetness may result in seed handling difficulties.

# **TANK MIXTURES**

This product may be tank mixed with 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 Corteva Agriscience Canada Company at 1-800-667-3852 or <a href="https://www.corteva.ca">www.corteva.ca</a> for information before applying any tank mix that is not specifically recommended on this label.

#### SEED QUALITY AND STORAGE OF TREATED SEED

- Laboratory and field studies have shown that Lumisure applied to seed will not adversely affect germination.
- Due to seed quality conditions beyond the control of Corteva Agriscience Canada Company, 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 Corteva Agriscience Canada
  Company, no claims are made to guarantee germination of carry-over seed.

# **ROTATIONAL CROP RESTRICTIONS**

Corn may be replanted at any time.

# RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that Lumisure is a Group 4 insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Lumisure or other Group 4 insecticides with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- 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.
- For further information or to report suspected resistance contact Corteva Agriscience Canada Company at 1-800-667-3852.

# STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal, or by cleaning of equipment.

# **STORAGE**

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

# CONTAINER DISPOSAL RECYCLABLE CONTAINER

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# **REFILLABLE CONTAINER**

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- 2. This container must only be refilled with Lumisure at designated locations.
- 3. Do not reuse container for other purposes.
- 4. Prior to refilling inspect thoroughly for damage.
- 5. Check for leaks after refilling and before transportation.
- 6. Do not refill or transport damaged or leaking containers.
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# **NOTICE TO USER**

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