

{Base Container Label}

GROUP	7	FUNGICIDE
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Excalia Fungicide

SUSPENSION CONCENTRATE
COMMERCIAL

ACTIVE INGREDIENT:
Inpyrfluxam 31.25%

Contains 1,2-benzisothiazolin-3-one at 0.019% OR 5-Chloro-2-methyl-4-isothiazolin-3-one at 0.00113% and 2-Methyl-4-isothiazolin-3-one at 0.00037% as preservatives.

WARNING – POISON



READ THE LABEL AND BOOKLET BEFORE USING

KEEP OUT OF REACH OF CHILDREN

REGISTRATION NO.: 33819
PEST CONTROL PRODUCTS ACT

Net Contents: 500 mL to bulk

Valent Canada, Inc.
201-230 Hanlon Creek Blvd.
Guelph, ON N1C 0A1
(519) 767-9262
www.valent.ca

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 or fatal if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco or using the toilet.

[OPTIONAL STATEMENT FOR SMALLER CONTAINER SIZE]

[Follow the personal protective equipment, engineering control, and restriction requirements for the appropriate mixer/loader and applicator scenario as described on the booklet label.]

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair, unless otherwise specified below. Gloves are not required during application within a closed cab.

For application using handheld airblast/mistblower, wear chemical-resistant coveralls with a chemical-resistant hood over long-sleeved shirt, long pants, chemical-resistant gloves, socks, chemical-resistant footwear and a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH-approved canister approved for pesticides.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothes. Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

DO NOT apply by aerial application equipment.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

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 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 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 the person to fresh air. If the 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 SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL OR POISONING CALL
1-800-682-5368***

TOXICOLOGICAL INFORMATION

There is no specific antidote for this product. Apply symptomatic therapy.

ENVIRONMENTAL PRECAUTIONS

[OPTIONAL STATEMENT FOR SMALLER CONTAINER SIZE]

[See booklet for full user precautions and restrictions.]

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

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.

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 filter strip between the treated area and the edge of the water body.

STORAGE

Keep pesticide in original container. Store in a cool, dry, secure place. Do not put formulation or dilute spray solution into food or drink containers. Store this product away from food or feed.

DISPOSAL

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 container unsuitable for further use.

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

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.

{Booklet Label}

GROUP

7

FUNGICIDE

Excalia Fungicide

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COMMERCIAL

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An INDIFLIN® brand

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RESISTANCE MANAGEMENT

For resistance management, please note that Excalia Fungicide contains a Group 7 fungicide. Any fungal population may contain individuals naturally resistant to Excalia Fungicide and other group 7 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 Excalia Fungicide or other Group 7 fungicides with different groups that control the same pathogens.
- Avoid application of more than the maximum number listed in the label and consecutive sprays of Excalia Fungicide or other fungicides in the same group in a year.
- 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 Excalia Fungicide 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 target site of action, if available.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or integrated disease management recommendations for specific crops or pathogens.
- For further information and to report suspected resistance, contact Valent Canada, Inc. at 1-800-682-5368 or at www.valent.ca.

GENERAL INFORMATION

MODE OF ACTION

The active ingredient in Excalia Fungicide, inpyrfluxam, belongs to FRAC Group 7, the succinate dehydrogenase inhibitor (SDHI) group of fungicides. As with other Group 7 fungicides, inpyrfluxam acts by inhibiting succinate dehydrogenase, a key enzyme in the fungal respiration chain.

Excalia Fungicide is a protectant fungicide that must be applied prior to infection for best control of diseases. Optimal disease control is achieved when Excalia Fungicide is applied in a regularly scheduled spray program in rotation with other effective fungicides that have different modes of action (i.e., non-FRAC Group 7 fungicides).

RAINFASTNESS

Applications should not be made if rain is expected within 1 hour of application or disease control may be reduced.

SPRAYER PREPARATION

Before applying Excalia Fungicide, start with clean, well-maintained application equipment. The spray tank hoses and booms must be cleaned to ensure no residue from the previous spraying operations remain in the sprayer. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply Excalia Fungicide. If two or more products were tank mixed prior to Excalia Fungicide application, the most restrictive cleanup procedure should be followed.

Application equipment should be clean and in good repair. Nozzles should be frequently checked for accuracy.

SPRAYER CLEANUP

Clean sprayer equipment each day following Excalia Fungicide application. After application is complete, use the following steps to clean spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.

2. Fill the spray tank with clean water and flush all hoses, booms, screens, and nozzles.
3. Drain tank completely.
4. Remove all nozzles and screens and rinse them in clean water.

MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. While agitating, slowly add the Excalia Fungicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
3. If tank mixing Excalia Fungicide with other labeled pesticides, add water soluble packets first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions.
4. Add any required adjuvants.
5. Fill spray tank to desired level with water. Agitation should continue until all spray solution has been applied.
6. Mix only the amount of spray solution that can be applied the day of mixing. Apply Excalia Fungicide within 24 hours of mixing.

SPRAY VOLUME

Use sufficient water volume to provide thorough and uniform coverage to obtain the most effective disease control.

Ground Application

For ground applications, use a minimum of 500 L/ha of water for apple and 100 L/ha of water per acre for soybean and sugar beet.

Airblast application

For air-assisted or airblast sprayers that move spray droplets into the crop canopy using a forced-air system, the fan should be set to deliver only enough air volume to penetrate the canopy and provide through coverage. Adjust deflectors or other aiming devices to direct spray only to the target area. Equip sprayer with nozzles that provide accurate and uniform application.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. Do not apply this product when weather conditions favour spray drift from treated areas. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making decisions.

ROTATIONAL RESTRICTIONS

The following rotational crops may be planted after applying Excalia Fungicide at the labeled rate. Planting earlier than the recommended rotational interval is not allowed.

CROPS	ROTATIONAL INTERVAL
Soybean Sugar Beet	Immediately

Cereals, oilseeds, and legumes (other than soybeans)	9 months
All other crops	12 months

DIRECTIONS FOR USE

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.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) coarse classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

DO NOT apply using aerial application equipment.

Buffer zones:

Spot treatments using hand-held equipment do not require a buffer zone. Use of low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage, and soil drench or soil incorporation do not require a buffer zone.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:		
		Freshwater Habitat of Depths:		Terrestrial Habitat:
		Less than 1 m	Greater than 1 m	
Field sprayer	Soybean, sugar beet	1	1	1

Airblast	Apple	Early growth stage	30	4	20
		Late growth stage	20	2	10

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

SPECIFIC DIRECTIONS FOR USE – ALL CROPS

When to Apply: Begin application when crop and/or environmental conditions favour disease development. Make applications on a 7- to 14-day interval, depending on disease pressure, unless otherwise noted under crop specific use instructions. Under severe disease pressure or if rain is expected, use the higher labeled rate and shortest interval. Apply as a foliar spray in sufficient water to obtain thorough coverage.

Tank Mixing: In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Valent Canada, Inc. at 519-767-9262 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label.

When tank mixing, read the label directions for each tank mix product and follow the most restrictive label precautions and limitations.

Resistance Management: Excalia Fungicide must be used as part of an Integrated Pest Management (IPM) program. When tank mixing, tank mix with a non-group 7 fungicide product that is registered for the same target pathogen.

See Table 1 Food Crop Use Pattern Summary for application parameters.

Table 1 - Food Crop Use Pattern Summary

Crops	Crop Stage or Minimum Time from Application to Harvest (PHI) Days	Maximum Rate per per Application (mL/ha)	Maximum Number of Sequential Applications	Maximum Number of Applications per Year	Maximum Rate per Hectare per Year (mL/ha)	Livestock Grazing or Feeding Restriction
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Apple	Petal fall	219	N/A	2	438	No
Soybean	R5	146	2	2	292	Yes
Sugar beet (single banded application)	50	146	n/a	1	146	No

CROP SPECIFIC DIRECTIONS, RESTRICTIONS AND LIMITATIONS

When applied as directed, Excalia Fungicide will control the listed diseases, unless indicated as suppression.

APPLE				
Diseases Controlled	Application Rate	Spray Volume	When to Apply	Use Restrictions
Apple scab (<i>Venturia inaequalis</i>) Powdery mildew* (<i>Podosphaera leucotricha</i>)	146-219 mL/ha (50-75 g ai/ha)	Minimum of 500 L/ha	Make applications from green tip through petal fall. Do not apply earlier than green tip.	Retreatment interval: 10 days. PHI: Do not apply after Petal Fall. *For powdery mildew, application must include a 100% organosilicone adjuvant, such as Xiameter, at 31.3-62.5 mL/100L water.
RESTRICTIONS:				
<ul style="list-style-type: none"> Do not make more than two applications of Excalia Fungicide per year. Do not apply more than 438 mL/ha of Excalia Fungicide per year. Do not apply with any surfactant except for a 100% organosilicone adjuvant. 				

CROP SPECIFIC DIRECTIONS, RESTRICTIONS AND LIMITATIONS:

SOYBEAN

Diseases Controlled	Application Rates	Spray Volume	When to Apply	Use Restrictions
Asian Soybean Rust (<i>Phakopsora pachyrhizi</i>)	146 mL/ha (50g a.i./ha)	Minimum of 100 L/ha	Make application prior to disease development.	Retreatment interval: 14 days Do not apply prior to V3 or after R5.

RESTRICTIONS

- Do not make more than two applications of Excalia Fungicide per year.
- Do not apply more than 292 mL/ha of Excalia Fungicide per year. Regardless of application method, i.e. foliar application (Excalia Fungicide) and seed treatment application (e.g., Zeltera Fungicide), do not apply more than 180 g a.i./ha of inpyrfluxam per year.
- Do not graze treated fields or feed treated hay to livestock.

CROP SPECIFIC DIRECTIONS, RESTRICTIONS AND LIMITATIONS:

SUGAR BEET				
Banded Application				
Diseases Suppressed	Application rate	Spray volume	When to Apply	Use Restrictions
Rhizoctonia crown and root rot (<i>Rhizoctonia solani</i>)	146 mL/ha (50 g a.i./ha)*, equivalent to: 0.22-0.26 mL (0.075-0.09 g a.i.)/100 row metres	Minimum of 100 L/ha	2 to 8 leaf stage	Apply in a 15 to 18 cm band over the crop row. *A non-ionic surfactant must be added to the spray solution at 0.125% v/v (125 mL/100 L water) Do not apply as a dribble application over the seed row. PHI: 50 days.
RESTRICTIONS				
<ul style="list-style-type: none"> • Do not make more than 1 application of Excalia Fungicide per year. Do not apply more than 146 mL/ha of Excalia Fungicide per year.				