

GROUP	1	HERBICIDE
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AXIAL[®] 100EC Herbicide

EMULSIFIABLE CONCENTRATE

AGRICULTURAL

A post emergence herbicide for control of wild oats, green foxtail, yellow foxtail, barnyard grass volunteer oats, volunteer canary seed and proso millet in Spring Wheat and Barley.

FOR SALE FOR USE ONLY IN THE PRAIRIE PROVINCES AND PEACE RIVER, OKANAGAN AND CRESTON FLATS REGIONS OF BRITISH COLUMBIA

GUARANTEE:

Pinoxaden..... 100 g/L

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

CAUTION



POISON

WARNING: EYE AND SKIN IRRITANT

REGISTRATION NO.: **28642**
PEST CONTROL PRODUCTS ACT

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PAMPHLET

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

IN CASE OF POISONING, contact a physician or a poison control centre **IMMEDIATELY**. 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

AXIAL 100EC Herbicide contains materials that may cause severe pneumonitis if aspirated. Treat symptomatically for ingestion and/or skin and eye contact. **THIS PRODUCT CONTAINS PETROLEUM DISTILLATES. VOMITING MAY CAUSE ASPIRATION PNEUMONIA.**

PRECAUTIONS

- KEEP OUT OF THE REACH OF CHILDREN.
- Harmful if swallowed.
- May irritate eyes. Do not wear contact lenses when using.
- DO NOT get in eyes or on skin. Avoid contact with clothing. Wear coveralls or long sleeved shirt and long pants, chemical resistant gloves, and goggles when mixing, loading or during equipment clean up or repair. Goggles and chemical resistant gloves are not required during application.
- Wash gloves thoroughly with soap and water before removing them during any operation.
- Wash hands thoroughly with soap and water after using this product and before eating, drinking or smoking.

- Remove contaminated clothing immediately after use. Store and wash contaminated clothing separately from household laundry before reuse. Wash thoroughly with soap and water after handling. Handle and apply only as recommended on this label.
- Do not eat, drink or smoke while mixing, loading or during application.
- DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. 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, application equipment and sprayer settings.

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., visit CropLife Canada's website at www.croplife.ca.

ENVIRONMENTAL HAZARDS

TOXIC to non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

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.

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.

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

Store the product in closed original container in a well-ventilated room. Keep out of reach of children, unauthorised persons and animals. Store separate from food, feed, and fertilizer.

DECONTAMINATION AND 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:**FOR DISPOSAL OF PLASTIC JUGS:**

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.

FOR REFILLABLE CONTAINERS:

For disposal, this empty 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.

***IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL, FIRE OR POISONING,
CALL 1-800-327-8633 (FASTMED)***

PRODUCT INFORMATION

AXIAL 100EC Herbicide is a systemic, post-emergence herbicide for the selective control of wild oats, green foxtail, yellow foxtail, barnyard grass, volunteer oats, volunteer canary seed and proso millet in Spring Wheat and Barley in the prairie provinces and the Peace River, Okanagan, and Creston Flats Regions of British Columbia.

AXIAL 100EC Herbicide is absorbed by the leaves and is rapidly translocated to the growing points of leaves and stems. Thorough coverage of the plants is essential for consistent control. Actively growing susceptible grasses stop growing within 48 hours of treatment. Depending on species, growing conditions and crop competition, leaves and growing points turn yellow within one to three weeks after application. Further colour changes and loss of vigour will be observed, followed by a browning and control three to five weeks after application.

Although AXIAL 100EC Herbicide does not control broadleaf weeds, AXIAL 100EC Herbicide can be tank-mixed with a range of broadleaf herbicides to provide broad spectrum weed control in Spring Wheat and Barley. See section entitled "TANK MIXES of AXIAL 100EC HERBICIDE WITH BROADLEAF WEED HERBICIDES" and refer to the appropriate Tank Mix section.

DIRECTIONS FOR USE

CROPS: Spring Wheat and Barley

AXIAL 100EC Herbicide can be used on all varieties of Spring Wheat and Barley.

One application per year is permitted.

Observe a minimum interval to harvest of 60 days after treatment for grain and straw and of 30 days after treatment for hay. Observe a minimum of 7 days before grazing livestock on crops treated with AXIAL 100EC Herbicide.

Do not apply on any crop other than Spring Wheat or Barley, as crop damage will result. Do not allow spray to drift to adjacent fields seeded to crops other than Spring Wheat or Barley. Do not treat Spring Wheat or Barley under-seeded to forages. Do not apply AXIAL 100EC Herbicide on highly sensitive crops such as: Tame Oats, Proso Millet, Red Millet, Crown Millet or Canary Seed.

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 ASAE medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rain, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted or fine textured such as clay).

Avoid application of this product 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.

Buffer zones:

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

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).

Method of application	Crop		Buffer zones (metres) required for the protection of:
			Terrestrial habitat
Field sprayer	Spring wheat and barley		1
Aerial	Spring wheat and barley	Fixed or rotary wing	25

* For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted

with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

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.

ROTATIONAL CROP INFORMATION

For fields treated with AXIAL 100EC Herbicide, no crop may be seeded until the following year. There are no crop rotation limitations the year following application of AXIAL 100EC Herbicide.

WEEDS CONTROLLED: Wild Oats, Green Foxtail, Yellow Foxtail, Barnyard Grass, Volunteer Oats, Volunteer Canary Seed and Proso Millet

Perennial grasses such as quack grass will not be controlled.

TIMING OF APPLICATION:

CROP / WEEDS*	GROWTH STAGE** (ZADOKS or BBCH)
SPRING WHEAT BARLEY	1 leaf to flag leaf stage (11, 20 to 37)
WILD OATS GREEN and YELLOW FOXTAIL BARNYARD GRASS VOLUNTEER OATS VOLUNTEER CANARY SEED PROSO MILLET	1 – 6 leaf, prior to 4 th tiller (11, 20 to 16, 23)

* When tank-mixing with a broadleaf herbicide, always refer to the label of the broadleaf partner prior to use.

** Do not apply past flag leaf stage.

For optimum results, apply AXIAL 100EC Herbicide to actively growing weeds. An early application will maximize crop yields by reducing weed competition. Weeds emerging after application of AXIAL 100EC Herbicide will not be controlled.

Weed control following application of AXIAL 100EC Herbicide alone, or in combination with broadleaf weed herbicides, can be reduced or delayed under stress conditions such as drought, heat, insufficient fertility, flooding or prolonged cool temperatures. Grass escapes or re-tillering may occur if application is made during prolonged stress conditions. Optimum weed control will be obtained if application of AXIAL 100EC Herbicide is delayed until the stress conditions have ended and weeds are once again actively growing.

AXIAL 100EC Herbicide alone can be used one hour before rainfall.

Do not apply to crop that is stressed by conditions such as frost, low fertility, drought, flooding, disease or insect damage as crop injury may result.

RATE OF USE:

Apply the recommended rate of AXIAL 100EC Herbicide and ADIGOR[®] Adjuvant in 50 L to 100 L of water per hectare for ground application and in a minimum of 30 L of water per hectare for aerial application. When tank-mixing AXIAL 100EC Herbicide with a tank-mix partner, ensure you read the tank-mix partner label for minimum water recommendations.

CROP	WEEDS CONTROLLED	USE RATES	
SPRING WHEAT BARLEY	WILD OATS GREEN and YELLOW FOXTAIL BARNYARD GRASS VOLUNTEER OATS VOLUNTEER CANARY SEED PROSO MILLET	AXIAL 100EC Herbicide ADIGOR Adjuvant	600 mL/ha 700 mL/ha

NOTES: Do not tank mix with any other adjuvants, chemical additives, pesticides or fertilizers unless recommended on this label.

TANK MIXES WITH BROADLEAF WEED HERBICIDES AND FUNGICIDES:

For broad spectrum weed control of annual grasses and broadleaf weeds AXIAL 100EC Herbicide can be tank-mixed with broadleaf herbicides as described in the following table. Consult the label of the tank-mix partner for a list of broadleaf weeds controlled, rates, timing, recropping restrictions, grazing interval restrictions, recommendations for specific weeds, directions for use and precautions. AXIAL 100EC Herbicide can also be tank-mixed with TILT[®] 250E Fungicide for suppression or control of diseases in spring wheat and barley listed on the TILT 250E Fungicide label. Consult the label of the tank-mix partner for a list of broadleaf weeds, or diseases controlled, rates, timing, recropping restrictions, grazing interval restrictions, recommendations for specific weeds/insects/diseases, directions for use and precautions and follow the more restrictive label. When tank-mixing always add the broadleaf herbicide(s), insecticide or fungicide to the spray tank first; followed by AXIAL 100EC Herbicide with ADIGOR Adjuvant added last. For the appropriate rate of AXIAL 100EC Herbicide, refer to the 'Rate of Use' section of the label.

Tank-Mix Partner ¹	Product Rates
Refine SG Herbicide ^{1,2}	30 g/ha
Refine SG Herbicide + MCPA Ester ^{3,4} 500	30 g/ha + 560 - 700 mL/ha
Refine SG Toss-N-Go Herbicide ^{1,2}	30 g/ha
Refine SG Toss-N-Go Herbicide + MCPA Ester ^{3,4} 500	30 g/ha + 560 - 700 mL/ha
Buctril ¹ M ⁴	1.0 L/ha
Frontline ¹ Herbicide Tank Mix ^{3,4}	100 mL/ha of Frontline A + 840 mL/ha of Frontline B
Curtail ¹ M ⁴	1.5 to 2.0 L/ha
Prestige ¹ Herbicide Tank Mix ⁴	600 - 800 mL/ha of Prestige A + 1.5 - 2.0 L/ha of Prestige B
Spectrum ¹ Herbicide Tank Mix ^{3,4}	100 mL/ha of Spectrum A + 1.5 L/ha of Spectrum B
Trophy ^{1,4}	0.6 L/ha of Trophy A + 1.12 L/ha of Trophy B

Tank-Mix Partner ¹	Product Rates
Mextrol 450 ⁴	1.25 L/ha
MCPA Ester ⁴ (assume 500 series)	840 mL to 1.1 L/ha
MCPA Ester ⁴ (assume 600 series)	700 – 920 mL/ha
TILT 250E Fungicide	250 – 500 mL
Infinity [†] Herbicide ⁵	0.83 L/ha
Frontline XL [†] Herbicide	1.25 L/ha
GF-184 Herbicide	1.0 L/ha
¹ Always consult the label of the broadleaf herbicide prior to use.	
² Addition of surfactants other than ADIGOR Adjuvant are not required.	
³ Suppression only of green foxtail.	
⁴ A reduction in barnyard grass control may be observed when AXIAL 100EC Herbicide is tank mixed with these broadleaf herbicides.	
⁵ For control of common ragweed and suppression of round-leaved mallow.	

When tank-mixing, always add the broadleaf herbicide(s) to the spray tank first; followed by AXIAL 100EC Herbicide with ADIGOR Adjuvant added last.

Temporary crop injury may occur with tank-mixes under extreme weather conditions or when the crop is suffering from stress due to inadequate or abnormally high moisture levels or extreme temperatures.

MIXING INSTRUCTIONS FOR GROUND APPLICATION:

1. Clean spray tank and half fill with clean water. Start agitation or bypass system.
2. If a broadleaf herbicide is to be used, add the product FIRST prior to adding AXIAL 100EC Herbicide and agitate for 2-3 minutes.
3. Add correct amount of AXIAL 100EC Herbicide.
4. Agitate for 2-3 minutes.
5. Add correct amount of ADIGOR Adjuvant.
6. Agitate for 1-2 minutes before adding remainder of water and then maintain constant agitation.
7. After any break in spraying operations, agitate thoroughly before spraying again.
8. **Use the spray suspension as soon as it is prepared.**

SPRAYING INSTRUCTIONS FOR GROUND APPLICATION:

1. Water Volume: 50 to 100 litres per hectare.
2. Spray Nozzles: 80° or 110° flat fan nozzles are recommended for optimal spray coverage. Use 50 mesh nozzle screens. Do not use flood type nozzles, controlled droplet application equipment, spray foils or hollow cone nozzles.
3. Pressure: 275 - 310 kPa.
4. Apply uniformly at 6 - 8 km/hr and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to avoid potential crop injury from an over application.

SPRAYER CLEAN-UP FOR GROUND APPLICATION:

Clean Up Before Spraying:

- Prior to using AXIAL 100EC Herbicide, ensure that the spray tank, lines and filter are

thoroughly clean.

Clean Up After Spraying:

- Thoroughly clean application equipment immediately after spraying. To avoid subsequent injury to other crops, immediately after spraying and before spraying other crops, thoroughly remove all traces of AXIAL 100EC Herbicide from mixing and spraying equipment.
- When using tank mixes, consult the tank-mix partner label for additional cleanup instructions.
- The following recommendations are provided:
 1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/detergent mixture. Rinse with clean water. **Do not** clean the sprayer near desirable vegetation, wells or other water sources.
 2. Remove all nozzles and screens and wash separately.
 3. Dispose of all rinsings in accordance with provincial regulations.

AERIAL APPLICATION

Instruction for Aerial Application

Apply AXIAL 100EC Herbicide alone or in tank mixes (ONLY with the recommended tank mix partners that are registered for aerial use) in no less than 30 litres of water per hectare.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particules (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-87-SYNGENTA (1-877-964-3682) or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Apply in at least 30 litres of water per hectare.

Avoid spraying when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. DO NOT allow nozzle spacing to exceed 65% of boom length.

DO NOT overspray non-target terrestrial or aquatic habitats. DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches, and wetlands), estuaries or marine habitats. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Resistance-Management Recommendations

For resistance management, AXIAL 100EC Herbicide is a Group 1 herbicide. Any weed population may contain or develop plants naturally resistant to AXIAL 100EC Herbicide and other Group 1 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. 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 herbicide resistance:

Where possible, rotate the use of AXIAL 100EC Herbicide or other Group 1 herbicides with different herbicide groups that control the same weeds in a field.

Use tank mixtures with herbicides from a different group when such use is permitted.

Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.

Monitor treated weed populations for resistance development. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

For further information or to report suspected resistance, contact company representatives at 1-87-SYNGENTA (1-877-964-3682) or at www.syngenta.ca.

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