

2019-3432
2020-02-11

IMPORTANT NOTICE

**This product is registered in both the U.S. and Canada. It has BOTH U.S. and Canada Labeling You must follow ONLY the U.S. label WHEN USING THIS product in the U.S.
You must follow ONLY the Canadian label WHEN USING THIS product in Canada.**

GROUP	8	HERBICIDE
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AVADEX MicroActiv Herbicide

Granular Herbicide for Fall or Spring Treatment in Conventional and Direct Seeding Systems to Control Wild Oats in labeled crops.
See the appropriate U.S. or Canadian Use Directions.

**AGRICULTURAL
ACTIVE INGREDIENT**

% By Wt.

Triallate, S-(2,3,3-trichloroallyl)-diisopropylthiocarbamate	10.0%
OTHER INGREDIENTS:	<u>90.0%</u>
TOTAL	100.0%

ATTENTION, contains the allergen soy.

CAUTION

Refer to the label booklet for additional precautionary information, directions for use, and the warranty statement. Read "NOTICE OF CONDITIONS OF SALE AND WARRANTY LIABILITY LIMITATIONS" before buying or using. If terms are not acceptable, return at once unopened.

FIRST AID Herbicide	
If swallowed	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. 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 center or doctor for 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. Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
When seeking medical attention, take the container label if at all possible. If not, take information which identifies the product, that is, the product names and registration numbers. You may also contact 1-888-478-0798 for emergency medical treatment information.	

TOXICOLOGICAL INFORMATION: Treat symptomatically.

United States AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40CFR Part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Refer to country specific label booklet for additional environmental hazard information.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS KEEP OUT OF REACH OF CHILDREN

Causes skin and eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not take internally. Refer to country specific label booklet for additional precautions.

STORAGE AND DISPOSAL IN THE U.S.

Do not contaminate water, foodstuffs, feed or seed by storage and disposal.

PESTICIDE STORAGE: Keep bag closed to prevent spills and contamination.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Completely empty container into transfer or application equipment. Offer for recycling, if available, or dispose of empty sack in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(For multiwall bags) Non refillable container. Do not reuse or refill this container. Completely empty container into application equipment. Offer for recycling if available, or dispose of empty container in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

STORAGE AND DISPOSAL IN CANADA

STORAGE: Keep Avadex MicroActiv Herbicide bag closed to prevent spills and contamination. Avoid contamination of seed, feed and foodstuffs.

DISPOSAL: Do not reuse this container for any purpose. Thoroughly empty the contents of the container into the application device. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements.

For information on the 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 spills.

In the United States: It is a violation of United States law to use this product without having obtained the United States label at the time of purchase and following the U.S. label at the time of application.

In Canada: NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offense under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

NET CONTENTS 995 lbs/451.3 kg 50lbs/22.7 kg



EPA Est. No.070989-IA-001
REGISTRATION No. 25112
PEST CONTROL PRODUCTS ACT
EPA Reg. No. 10163-287
AVMA-02-R0107

Produced for:
Gowan Company
P.O. Box 5569
Yuma, AZ 85366-5569 U.S.A.
Product Information, contact: 1-800-883-1844

CANADIAN LABEL - It is a violation of Canadian law to use this product in Canada in a manner inconsistent with its Canadian labelling.

AVADEX MICROACTIV HERBICIDE

In Canada

Granular Herbicide for Fall or Spring Treatment in Conventional and Direct Seeding Systems to Control Wild Oats in Spring and Durum Wheat, Barley, Rapeseed (including Canola), Flax (not including low linolenic acid varieties), Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets and Canary Seed.

ACTIVE INGREDIENT	% By Wt.
Triallate, S-(2,3,3-trichloroallyl)-diisopropylthiocarbamate	10.0%
OTHER INGREDIENTS:	90.0%
	TOTAL 100.0%

ATTENTION, contains the allergen soy

CAUTION

AGRICULTURAL Complete Directions for Use

REGISTRATION NO. 25112 PEST CONTROL PRODUCTS ACT

Use only according to label instructions.

IMPORTANT NOTE: Before use, recalibrate application equipment.

READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT. Use only according to label instructions. Read "NOTICE OF CONDITIONS OF SALE AND WARRANTY LIABILITY LIMITATIONS" before buying or using. If terms are not acceptable, return at once unopened.

NET CONTENTS: 451.3 kg

Gowan[®]
CANADA
GOWAN Company
P.O. Box 5569
Yuma, Arizona 85366-5569

Product Information: 1-800-883-1844

PRECAUTIONS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

KEEP OUT OF REACH OF CHILDREN

Causes skin and eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not take internally.

Wear chemical-resistant coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks, and chemical-resistant footwear during mixing, loading, application, clean-up and repair. Chemical-resistant coveralls and gloves are not required during aerial application within a closed cockpit. In addition, during mixing, loading, clean-up and repair, wear either a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH-approved canister approved for pesticides.

FIRST AID Herbicide	
If swallowed	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. 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 center or doctor for 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. Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
When seeking medical attention, take the container label if at all possible. If not, take information which identifies the product, that is, the product names and registration numbers. You may also contact 1-888-478-0798 for emergency medical treatment information.	

TOXICOLOGICAL INFORMATION

Treat symptomatically.

RESTRICTED-ENTRY INTERVAL

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

Runoff

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 rainfall, 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.

Leaching

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.

Volatilization

The active ingredient contained in this product is known to volatilize. To reduce the atmospheric loading of triallate, effort should be made to reduce the volatilization such as the following:

- Incorporation into the soil concurrently with application.
- Application should occur when soil temperatures are 4°C or less.

STORAGE

Keep Avadex MicroActiv Herbicide bag closed to prevent spills and contamination. Avoid contamination of seed, feed and foodstuffs.

DISPOSAL

Do not reuse this container for any purpose. Thoroughly empty the contents of the container into the application device. Make the empty container unsuitable for further use. Dispose of the container in accordance with provincial requirements.

For information on the 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 this 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.

GENERAL INFORMATION

Wear chemical-resistant coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks and chemical-resistant footwear during mixing, loading, application, clean-up and repair. Chemical-resistant coveralls and gloves are not required during aerial application within a closed cockpit. In addition, during mixing, loading, clean-up and repair, wear either a respirator with a NIOSH-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH-approved canister approved for pesticides.

This granular herbicide is recommended for wild oat control in conventional or direct seeding systems in spring and durum wheat, barley, rapeseed (including canola), flax (not including low linolenic acid varieties), yellow and brown mustard, Oriental mustard (condiment and oilseed types), sugar beets and canary seed, and field peas. Other crops should not be treated with this product as injury may occur.

This product can be either fall or spring applied according to the recommendations on this label. Seeding may be done either before or after application and incorporation in the spring depending upon the crop that is to be sown.

Pre-plant incorporated treatments generally provide superior wild oat control as compared to post-plant incorporated treatments.

This granular herbicide should be applied on the soil and incorporated before weeds germinate. If weeds have emerged prior to application, they must be controlled by tillage.

Application equipment must be properly calibrated. Application of an excessive rate of Avadex MicroActiv Herbicide may injure the crop, whereas application of too low a rate may result in poor wild oat control. Before applying this product, be sure the soil is in good working condition. Clay soils may require additional tillage to obtain good tilth. Application to a field which is wet, lumpy, rough or ridged will result in reduced wild oat control and promote crop thinning. See the "**Field Preparation**" section for additional information.

The initial incorporation of this product into the soil must be completed within 48 hours after application and before germination of wild oats, except for treatments in direct seed systems. (Refer to the "**Minimum Tillage/Direct Seeding Systems**" section of this label). The incorporation should not be deeper than 5 cm, as deeper incorporation tends to dilute the product, thus decreasing wild oat control and increasing the risk of crop injury. See the "**How to Incorporate**" section for additional information.

When using Avadex MicroActiv Herbicide, an untreated strip should be left for proof of results. Weed control may be evaluated by removing a surface 2.5 to 5 centimetres of soil at the time of germination to inspect the number of wild oats that were killed before emergence. This product is primarily absorbed by wild oat shoots from the treated layer of the soil. Wild oats are usually controlled before they emerge through the soil. Occasionally, and particularly under dry conditions and/or cool soil temperatures, some wild oats may emerge and reach the 3 to 4 leaf stage before dying.

Rainfall of at least 1.5 centimetres within 2 weeks after application in the spring is required to ensure maximum performance of the spring treatment.

Under conditions of prolonged cool soil temperatures at the time of germination, or extreme drought in spring, this product may not

maintain the usual high standard of wild oat control.

FOR BEST RESULTS ON SPRING APPLICATIONS IN CONVENTIONAL SEEDING SYSTEMS, DELAY THE SECOND INCORPORATION FOR AT LEAST 48 HOURS FOLLOWING THE FIRST. Under conditions of prolonged cool soil temperatures or extreme drought, a longer delay may be utilized to maximize control.

Underseeding legumes: This product can be used in labelled crops which are to be underseeded to forage legumes such as alfalfa, clovers and trefoil provided that the legumes are not harvested for green chop, silage or hay in the year of seeding.

DO NOT apply more than one application per year.

DO NOT apply this product directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries and marine habitats.

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

NOTE

Thinning in wheat following treatment has been known to occur under conditions of heavy rainfall and/or cold weather after application and before crop emergence. Thinning is usually avoided by applications after seeding in the spring and minimized **WHEN THE SEED IS PLACED 1.5 TO 2.5 CENTIMETRES BELOW THE AVADEX MICROACTIV HERBICIDE TREATED SOIL LAYER.** Thinning is usually more than offset by tillering and increased yields.

Some wheat thinning may be noted on eroded knolls.

Domestic oats should not be seeded where Avadex MicroActiv Herbicide was used the previous year. There is a possibility that this product may carry over sufficiently to injure this crop.

CAUTION: Do not graze the treated crops or cut for hay; there are not sufficient data to support such use.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Avadex MicroActiv Herbicide is a Group 8 herbicide. Any weed population may contain or develop plants naturally resistant to Avadex MicroActiv Herbicide and other Group 8 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 Avadex MicroActiv Herbicide or other Group 8 herbicides within a growing season (sequence) or among growing seasons 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. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- 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 Gowan Company at 1-800-883-1844 or at www.gowanco.com.

HOW TO APPLY & CALIBRATE EQUIPMENT

Avadex MicroActiv Herbicide must be applied through a ground broadcast applicator such as a grass seed attachment or a specially designed ground broadcast applicator. This product can also be applied by an airplane capable of applying small quantities of granules evenly.

GROUND EQUIPMENT

It is important that the applicator be calibrated properly to deliver the desired amount of this product to avoid applying too little or too much material. To give even distribution, scatter plates (similar to those used for applying granules in a band) must be attached to give overall coverage. To calibrate, attach cloth or strong plastic bag over each spreader plate or delivery tube. Operate over normal terrain to be treated at 6 to 8 km/h. Collect the granules from all outlets after covering the desired distance.

For example: If a 4.25 metres applicator is being used, stake off a distance of 200 metres in the field to be treated. After attaching a bag to each outlet, collect the granules while driving the distance. Check to see that each outlet disperses the same amount of granules. Combine all samples and weigh. For the above set of conditions, the quantities of granules that should be collected for the following recommended rates for broadcast treatment are:

	Recommended Rate		
	11 kg/ha	14 kg/ha	17 kg/ha
Proper amount to be collected =	0.9 kg	1.2 kg	1.5 kg

If more or less than the desired quantity is collected, adjust opening accordingly and again collect the granules while driving the staked off distance. Continue this procedure until the proper amount is delivered.

To calibrate applicators using air pressure to disperse the granules, follow directions as outlined by manufacturer.

AERIAL APPLICATION

Directions for Use

Do not use human flaggers.

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(s) 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, or equivalent electronic positioning systems (GPS). The use of a spotter plane is recommended.

VADEX MICROACTIV HERBICIDE RATES (kg/ha) Aerial Application

CROP	--- ORGANIC MATTER---	
	2 - 4%	GREATER THAN 4%
Spring & Durum Wheat	14	17
Barley, Canary Seed	14	17
Canola, Flax**, Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets	17	22
Field peas	17	22

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 granules onto any body of water or other non-target areas.

Do not apply during periods of dead calm or when wind velocity and direction pose a risk of drift. Do not apply when the 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 or 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 1-800-883-1844 or obtain technical advice from the distributor or your provincial agricultural representative.

For aerial applications, attachments designed for applying low volumes of granules must be used. Appropriate modifications should be made to equipment to ensure precise application. It is also necessary to properly calibrate equipment to ensure uniformity of application and proper rate.

FIELD PREPARATION

Before applying this product be sure the soil is in good working condition. All deep tillage by cultivation or double disc implements must be completed prior to application of this product. If excessive trash is present, additional tillage or other appropriate trash management practice will be necessary to reduce the trash cover to an acceptable level before application as too much trash can make uniform incorporation difficult.

If the soil is excessively wet or lumpy, making proper incorporation difficult, cultivation with suitable tillage equipment may be required before application and incorporation to improve the soil condition. If ridging is a problem, suitable tillage is recommended prior to application to eliminate the ridging and ensure uniform distribution of the herbicide. Fall tillage is not necessary with the direct seed - high disturbance systems fall treatment.

DIRECTIONS FOR USE

DO NOT apply more than one application per year.

DO NOT apply this product directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries and marine habitats.

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

MINIMUM TILLAGE/DIRECT SEEDING SYSTEMS

Prairie Provinces and Interior of BC ONLY Incorporation

High Disturbance Systems (Minimum Tillage)

A high disturbance incorporation can be conducted prior to seeding or as part of the seeding operation. A high disturbance system is one that disturbs the soil enough so that emerged weeds are controlled by the tillage. (High disturbance may be caused by the seed drill - cultivator or disc type, or with harrows following the seed drill, or both). Levelling the soil at or after seeding with harrows will ensure uniform product coverage and best performance.

Application of granules 10-14 days prior to incorporation is required for best results.

Low Disturbance Systems

A low disturbance operation (eg. zero tillage seeding operation) can also be used. A low disturbance system (eg. zero tillage air seeder) will not disturb the soil enough to control emerged weeds; therefore, a preseeding burnoff treatment using a herbicide such as Roundup® may be necessary. Application of granules at least two weeks prior to incorporation is required for best results.

For optimum results with Avadex MicroActiv Herbicide treatments in direct seed systems, seed when wild oat growth is noticeable in the field. This will ensure that the soil is warm enough for activation of Avadex MicroActiv Herbicide.

Minimum Tillage/Direct Seed applications should not be made to fields covered with snow or excessive crop residue which will not allow granule contact with soil. If excessive crop residue exists at the time of application, a vigorous harrowing can be used to ensure that the herbicide granules make adequate contact with the soil.

Under excessively warm or wet conditions between application and crop emergence, control may be reduced. For best results on heavy wild oat infestations, use the incorporated treatment only.

Soil colour may not be a precise indicator of organic matter content. Ensure that the application rate chosen from the table below is appropriate for your soil type.

Do not apply by surface application more than once per year.

FALL TREATMENT

Where fields are prone to water and/or wind erosion and fall tillage is therefore undesirable, fall minimum tillage applications should be made when the average soil temperature at the 5 centimetres depth is 4 °C or less and within 3 weeks of soil freeze up. This situation generally occurs by October 1 across the Prairies.

Apply at rates shown in the following table. Applications should be made to standing stubble, chemical fallow, or summerfallow fields in a state of low soil erodibility. Avoid smooth, hard-packed soil conditions which may allow granules to drift. Avoid applications to fields in a state of high soil erodibility.

No fall incorporation is required. Incorporation may be conducted in the spring prior to seeding or at seeding.

Applications should not be made to fields covered with snow or excessive crop residue which will not allow granule contact with soil. If excessive crop residue exists at the time of application, a vigorous harrowing can be used to ensure that the herbicide granules make adequate contact with the soil.

Under excessively warm or wet conditions between application and crop emergence, control may be reduced. For best results on heavy wild oat infestations, use the incorporated treatment only.

Soil colour may not be a precise indicator of organic matter content. Ensure that the application rate chosen from the table below is appropriate for your soil type.

Do not use this treatment on soils with less than 2% organic matter content.

AVADEX MICROACTIV HERBICIDE RATES (kg/ha) - FALL
(Minimum Tillage/Direct Seed Systems)

CROP	ORGANIC MATTER		SEEDING DEPTH
	2-4%	Greater than 4%	
Spring & Durum Wheat	14	17	5 - 7.5 cm*
Barley, Canary Seed	14	17	5 - 7.5 cm*
Canola, Flax**, Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets	17	22	As desired
Field peas	17	22	As desired

* This seeding depth will ensure placement below the treated layer.

** Do not use on low linolenic acid varieties of flax

SPRING TREATMENT

Apply Avadex MicroActiv Herbicide in the Spring when average soil temperature at the 5 centimetre depth is 4°C or less. Use the rate appropriate for soil type as shown in the table below. Application should be made to soils which have adequate trash cover to prevent soil erosion between application and seeding. **Ensure that the time between application and incorporation is a minimum of**

10 to 14 days. Do not apply more than 4 weeks before intended seeding.

Refer to Minimum Tillage – Fall treatment section for relevant information on field and weather conditions prior to application of Avadex MicroActiv Herbicide.

Incorporation may occur prior to or at seeding, as described below.

**VADEX MICROACTIV HERBICIDE RATES (kg/ha) - SPRING
(Minimum Tillage/Direct Seed Systems)**

CROP	ORGANIC MATTER		SEEDING DEPTH
	4% or Less	Greater than 4%	
Spring & Durum Wheat	14	17	5 - 7.5 cm*
Barley, Canary Seed	14	17	5 - 7.5 cm*
Canola, Flax**, Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets	17	22	As desired
Field peas	17	22	As desired

* This seeding depth will ensure placement below the treated layer.

** Do not use on low linolenic acid varieties of flax

VADEX MICROACTIV HERBICIDE APPLICATIONS IN CONVENTIONAL TILLAGE SYSTEMS

HOW TO INCORPORATE

This product must be incorporated into the soil, using suitable tillage equipment, in order to provide wild oat control. Two incorporation operations at right angles to one another are necessary for thorough mixing of this product in the soil, except for treatments in minimum tillage/direct seeding systems. The first incorporation should be completed within 48 hours of application, whereas the second incorporation may or may not be done immediately thereafter, depending upon the timing of the application. See the "**Fall Incorporation**" and "**Spring Incorporation**" sections of this label for additional information.

Do not incorporate this product more than 5 centimetres. This can be accomplished by setting the tillage equipment to work the soil no deeper than 7.5 centimetres to 10 centimetres. Shallow incorporation is necessary to prevent dilution of the product, thus decreasing wild oat control and increasing the risk of crop injury.

Harrowing does not provide effective incorporation if compact soil prevents penetration of harrow teeth or if trash accumulates in the harrow sections or if harrows bounce.

FALL INCORPORATION

This product must be incorporated as described in the "**How to Incorporate**" section of this label.

For fall applications (except for treatments in minimum INCORPORATION IN CONJUNCTION WITH FALL FERTILIZER tillage/ direct seeding systems), only one incorporation is required in the fall. The second incorporation may be done either in the fall (prior to soil freeze-up) or in the spring. See the "**Spring Incorporation**" section for additional information.

BANDING

This product may be broadcast prior to or in conjunction with fall fertilizer banding. It is necessary to ensure that the shank spacing, speed of travel and soil conditions (including moisture content and crop residue levels) are suitable to ensure that sufficient soil is being thrown to cover the granules.

If the following seeding operation is to be conducted using either a hoe drill or a double disc press drill, then the second incorporation (fall or prior to seeding in the spring) must be conducted using a field cultivator or similar equipment to ensure uniform distribution of the herbicide.

Contact your distributor or local crop advisor for specific recommendations for applying this product in conjunction with fall fertilizer banding.

SPRING INCORPORATION

Before Seeding

This product must be incorporated as described in the "**How to Incorporate**" section of this label.

This product may be incorporated prior to the seeding of any labelled crop. See the "**General Information**" section for exceptions.

The second incorporation may then be conducted any time until crop emergence. If the second incorporation is conducted after seeding, a harrow or other suitable tillage equipment adjusted to a depth so as not to disturb the seed should be used.

If ridging is a problem after seeding, one harrowing is recommended to eliminate the ridging and ensure uniform distribution of the herbicide.

After Seeding

This product must be incorporated as described in the "**How to Incorporate**" section of this label.

This product may be incorporated after the seeding of any labelled crop. See the "**General Information**" section for exceptions.

Seed to a depth of 5 to 7.5 centimetres, then immediately shallowly incorporate to a depth of 4 to 5 centimetres using suitable equipment, such as harrows.

The second incorporation must be conducted at a right angle to the first incorporation, any time prior to crop emergence.

Adjust incorporation equipment to a depth so as not to disturb the seed.

NOTE

FOR BEST RESULTS ON SPRING APPLICATION, DELAY THE SECOND INCORPORATION FOR AT LEAST 48 HOURS FOLLOWING THE FIRST. Under conditions of prolonged cool soil temperatures or extreme drought, a longer delay may be utilized to maximize control.

DIRECTIONS FOR USING AVADEX MICROACTIV HERBICIDE IN CONVENTIONAL TILLAGE SYSTEMS

The recommended higher rates of this product should be used in soils with greater than 4 percent organic matter content.

Fall Treatment (Incorporated)

Fall applications of this product must be made after September 15 and until soil freeze-up. Applications made before September 15 may result in reduced effectiveness of the herbicide. See the "**Field Preparation**" and "**How to Incorporate**" sections of this label for additional information.

**AVADEX MICROACTIV HERBICIDE RATES (kg/ha)
FALL TREATMENT (Incorporated)**

CROP	ORGANIC MATTER			SEEDING DEPTH
	2% OR LESS	2 – 4%	GREATER THAN 4%	
Spring & Durum Wheat	11	14	17	5 – 7.5 cm*
Barley, Canary Seed	11	14	17	5 – 7.5 cm*
Canola, Flax**, Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types), Sugar Beets	14	17	22	As desired
Field peas	14	17	22	As desired

*This seeding depth will ensure placement below the treated layer. DO NOT SEED DEEPER THAN 7.5 CENTIMETRES.

** Do not use on low linolenic acid varieties of flax

Spring Treatment (Incorporated)

This product can be applied either before or after seeding labelled crops, except as noted in the following table. For applications before seeding, seed to the proper depth immediately or up to 3 weeks after application. Superior wild oat control is generally achieved from applications made before seeding.

For applications made after seeding, application and both incorporations must be completed prior to emergence of the crop. For after seeding applications, optimum wild oat control is achieved when the application and initial incorporation are made as soon as possible after seeding.

See the "**Field Preparation**" and "**How to Incorporate**" sections of this label for additional information.

**AVADEX MICROACTIV HERBICIDE RATES (kg/ha)
SPRING TREATMENT (Incorporated)**

CROP	APPLICATION TIMING	ORGANIC MATTER		SEEDING DEPTH
		LESS THAN	GREATER THAN 4%	
Spring & Durum Wheat**	Before Seeding	11	14	5 – 7.5 cm*
	After Seeding	14	17	5 – 7.5 cm*
Barley, Canary	Before & After	14	17	5 – 7.5 cm*
Canola, Flax*** Yellow and Brown Mustard, Oriental Mustard (condiment and oilseed types),	Before Seeding	17	22	As desired
Field peas	Before Seeding	17	22	As desired

*This seeding depth will ensure placement below the treated layer.
DO NOT SEED DEEPER THAN 7.5 CENTIMETRES.

**DO NOT APPLY this product before seeding wheat in soils with 4 percent or less organic matter (brown, dark brown or grey-wooded soil zones) where discers are to be used for the seeding operation. If an air seeder is to be used, it must be equipped with a depth control device to ensure accurate seed placement, otherwise crop injury may occur.

*** Do not use on low linolenic acid varieties of flax

Buffer Zones

The buffer zones specified 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, pastures, rangeland and shrub lands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine or marine habitats.

Method of Application	Buffer Zone (metres) Required for the Protection of:			
	Aquatic Habitat at Water Depths:			Terrestrial Habitat
	< 1 metre	1 – 3 metres	>3 metres	
Ground sprayer*	5	2	1	5
Ground sprayer with shrouds	2	1	0	2
Ground sprayer with cones	4	1	0	4

*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 or ground, 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 or ground, the labelled buffer zone can be reduced by 30%.

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Gowan Company under the User Requested Minor Use Label Expansion program. For these uses, Gowan Company has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

Annual Canarygrass

Annual canarygrass seeds can be harvested for human consumption. For control and suppression of labelled weeds. Make one application per year using pre-plant incorporation. Refer to the label for weed species suppressed/controlled and incorporation directions.

Recommended Rates of Avadex MicroActiv

11-17 kg/ha depending on soil type, refer to label recommendations

In case of a medical emergency involving this product, call 1-888-478-0798.

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