

2016-1617
2016-03-30

Bag Label

GROUP	3	8	HERBICIDES
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FORTRESS® MICROACTIV HERBICIDE

Granular herbicide for Fall and Spring treatment to control wild oats and wild millet (green and yellow foxtail) in Spring and Durum Wheat, Spring Barley, Rapeseed (including Canola), Flax (not including low linolenic acid varieties), and Mustard.
Also provides suppression of several annual broadleaved weeds.

GUARANTEE: TRIALLATE - 10% TRIFLURALIN - 4%

POTENTIAL SKIN SENSITIZER

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

AGRICULTURAL

COMPLETE DIRECTIONS FOR USE

REGISTRATION NO. 19521, PEST CONTROL PRODUCTS ACT

NET CONTENTS: 22.7 kg, 454 kg

IMPORTANT NOTE: Before use, recalibrate application equipment.

Read NOTICE before buying or using. If notice terms are not acceptable, return at once unopened.

Gowan Company
P.O. Box 5569
Yuma, AZ 85366-5569
Product Information: 1-800-883-1844

NOTE: Populations of green foxtail tolerant to trifluralin have developed in a number of fields in Western Canada which have a long history of repeated trifluralin use. Trifluralin or ethalfluralin containing products (i.e. ADVANCE®, HERITAGE®, RIVAL®, TREFLAN®, TRIFLUREX®, FORTRESS and EDGE®) will not control trifluralin-tolerant green foxtail. To delay selection or reduce the spread of trifluralin-tolerant green foxtail, avoid use of these products repeatedly in the same field, or use a separate non-trifluralin herbicide application for control of trifluralin-tolerant green foxtail.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.
MAY CAUSE SKIN AND EYE IRRITATION.
MAY BE HARMFUL IF SWALLOWED.
Wash thoroughly after handling.
Do not take internally.
Do not get in eyes or on skin or on clothing.
Launder clothes before reuse.

All handlers must 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. In addition, during mixing, loading, clean-up and repair activities, wear either a respirator with a NIOSH/MSHA/BHSE-approved organic-vapour-removing cartridge with a prefilter approved for pesticides OR a NIOSH/MSHA/BHSE-approved canister approved for pesticides. Aerial mixers/loaders must also wear coveralls.

If this 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 web site at www.croplife.ca.

Restricted-Entry Interval

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

POTENTIAL SKIN SENSITIZER

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.

ENVIRONMENTAL HAZARDS:

Runoff

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 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 less than 4°C or less.

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

FIRST AID

IF SWALLOWED: Call a poison control centre 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 centre 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 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.

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

For medical emergencies involving this product, call PROSAR at 1-888-478-0798.

TOXICOLOGICAL INFORMATION

Treat symptomatically.

STORAGE

Keep Fortress Microactiv Herbicide bag closed to prevent spills and contamination.

Avoid contamination of seed, feed and foodstuffs.

DISPOSAL

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow the provincial instruction for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.

4. Dispose the container in accordance with provincial requirements.
5. 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 the cleanup of spills.

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 the product.

Fortress[®] is a registered trademark of Gowan Company LLC.

Advance, Edge, Heritage and Treflan are registered trademarks of Dow AgroSciences Canada Inc.

Rival is a registered trademark of Aventis CropScience Canada Inc.

Triflurex is a registered trademark of Makhteshim-Agan of North America Inc.

BOOKLET

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ENVIRONMENTAL HAZARDS:

Runoff

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 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.

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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.

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For medical emergencies involving this product, call PROSAR at 1-888-478-0798.

TOXICOLOGICAL INFORMATION

Treat symptomatically.

GENERAL INFORMATION

This granular herbicide is recommended for wild oat and wild millet (green and yellow foxtail) control in spring and durum wheat, spring barley, rapeseed (including canola), flax (not including low linolenic acid varieties) and mustard only.

This product will also provide suppression of the following annual broadleaved weed species: lamb's quarters, kochia, redroot pigweed, Russian thistle and wild buckwheat. Other crops should not be treated with this product as injury may occur.

This product should be applied according to the recommendations on this label. See the **"Directions For Use"** section for additional information.

Application equipment must be properly calibrated. Application of an excessive rate of granular Fortress Microactiv Herbicide may injure the crop, whereas application of too low a rate may result in poor weed 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 weed 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 24 hours after application, except for the Fall surface treatment. For Fall surface guidelines, see the **"Fall Treatment (surface)"** section of this label. The incorporation should not be deeper than 5 cm as deeper incorporation tends to dilute the product, thus decreasing weed control and increasing the risk of crop injury. See the **"How To Incorporate"** section for additional information.

When using granular Fortress Microactiv Herbicide, an untreated strip should be left for proof of results. Wild oat control may be evaluated by removing a surface 2.5 to 5 cm 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. Wild Millet seedlings will generally be controlled as they germinate.

Rainfall of at least 1.5 cm within 2 weeks after seeding in the spring is required to ensure maximum performance.

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 weed control.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Fortress Microactiv Herbicide is both a Group 3 and a Group 8 herbicide. Any weed population may contain or develop plants naturally resistant to Fortress Microactiv Herbicide and other Group 3 or 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 Fortress Microactiv Herbicide or other Group 3 or 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 treated weed populations after herbicide application for signs of resistance development (for example, only on 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 FORTRESS MICROACTIV HERBICIDE AND CALIBRATE APPLICATION EQUIPMENT

Granular Fortress 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 band) must be attached to each delivery tube or outlet in such a manner 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 m applicator is being used, stake off a distance of 200 m 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

Amount to be collected	11 kg/ha 0.9 kg	14 kg/ha 1.2 kg	17 kg/ha 1.5 kg
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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 the manufacturer.

AERIAL APPLICATION

Do not use human flaggers.

Directions for Use

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, or equivalent electronic positioning systems (GPS).

GRANULAR FORTRESS RATES					
(kg/ha)					
AERIAL APPLICATION					
Crop	Less than 2% OM	2-4% OM	4-6% OM	6-8% OM	Greater than 8% OM
Spring and Durum Wheat	-	11	14	14	17
Spring Barley	11	14	14	17	17

Rapeseed, (including Canola) Flax**, Mustard	14	14	14	17	17
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Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even target 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 spread 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 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 Gowan Company 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.

See the “**Directions for Use**” section of this label for application rates and additional information.

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 conditions. 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 Fall surface treatment.

HOW TO INCORPORATE

This product must be incorporated into the soil, using suitable tillage equipment, in order to provide weed control. Two incorporation operations at right angles to one another are necessary for thorough mixing of this product in the soil. The first incorporation should be completed within 24 hours of application, except for the Fall Surface application. The second incorporation may then be done during the fall or delayed until the spring.

Do not incorporate this product more than 5 cm. This can be accomplished by setting the tillage equipment to work the soil not deeper than 7.5 cm to 10 cm. Shallow incorporation is necessary to prevent dilution of the product, thus decreasing weed 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 section or if harrows bounce.

FALL INCORPORATION

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

Only one incorporation is required in the fall, except for the fall surface treatment. The second incorporation may be done either in the fall (prior to soil freeze-up) or in the spring. If the second incorporation is done in the spring it may be done any time until crop emergence. If the second incorporation is conducted after seeding it should be done with a harrow or other suitable tillage equipment adjusted to a depth so as not to disturb the seed. If ridging is a problem after seeding, one harrowing is recommended to eliminate the ridging and ensure uniform distribution of the herbicide.

SPRING INCORPORATION

Before Seeding

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

