

2014-1009
2014-10-16
(Booklet Label)

GROUP	14	15	HERBICIDES
-------	----	----	------------

Fierce Herbicide

Wettable Granules
COMMERCIAL

**FOR CONTROL AND/OR SUPPRESSION OF CERTAIN WEEDS IN SOYBEAN,
FALLOW LAND AND NON CROP AREAS AROUND FARMS, AND TO MAINTAIN
BARE GROUND ON NON-CROP AREAS.**

GUARANTEE:	
Flumioxazin.....	33.5%
Pyroxasulfone.....	42.5%

<p>READ THE LABEL BEFORE USE</p> <p>KEEP OUT OF REACH OF CHILDREN</p>

REGISTRATION NO.: 31117 PEST CONTROL PRODUCTS ACT

WARNING
EYE AND SKIN IRRITANT

Net Contents: 500 g - Bulk

Valent Canada, Inc.
3 – 728 Victoria Road South,
Guelph, ON N1L 1C6
Phone: 519-767-9262

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

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. 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.

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
1-800-892-0099***

TOXICOLOGICAL INFORMATION

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

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN. Harmful if inhaled or absorbed through the skin. Causes eye irritation. **DO NOT** get in eye. May irritate skin. Avoid contact with skin.

Follow mixer/loader and applicator scenario as appropriate in the chart below:

In addition, wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes, goggles or face shield during clean-up and repair activities.

Equipment	Personal Protective Equipment		Maximum amount of product handled per day
	Mixer/Loader	Applicator	
Groundboom	Chemical-resistant coveralls over long sleeved shirt and long pants, chemical-resistant gloves, socks and shoes, and goggles or faceshield	Open cab: coveralls over long-sleeved shirt, long pants, socks and shoes, and chemical-resistant gloves, and 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	58 kg
		Closed cab*: long-sleeved shirt, long pants, socks and shoes. (No gloves are required, but must be available for maintenance activities)	
Right-of-Way sprayer	Chemical-resistant coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes. Mixers and loaders must also wear goggles or faceshield.		11 kg
Backpack or High-pressure handwand equipment	Coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and 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. Mixers and loaders must also wear goggles or faceshield.		1.8 kg
Low-pressure Hand-held Equipment			0.48 kg

* A closed cab is a chemical resistant barrier that completely surrounds the occupant of the cab and prevents contact with the pesticide or treated surfaces outside the cab.

Do not eat, drink or smoke during work. Wash hands and face thoroughly before eating, drinking, smoking, chewing gum, or using the toilet. Immediately wash off accidental splashes of the concentrate or spray mixture from skin, clothing and out of eyes. Remove clothing immediately if pesticide gets inside. Wash thoroughly and put on clean clothing. After work, change clothing and wash entire body thoroughly. Wash contaminated working clothes separately from other laundry before reuse.

Do not apply when weather conditions favour spray drift from treated areas. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Keep all unprotected persons out of operating areas, or vicinity where there may be drift. Only protected handlers may be in the area during application.

Do not apply by air.

Do not enter or allow entry into treated areas until the sprays have dried in non-crop bare ground use areas. Do not enter or allow worker entry into treated areas until the restricted entry interval of 12 hours for all crop uses.

Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.

Do not apply within 100 metres of non-dormant pears.

Do not apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.

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

Read and understand the entire label before opening this product. If you have any questions, call the manufacturer at 914-682-8934 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:

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

Under some conditions this product may have a potential to run-off to surface water or adjacent land. Where possible, use methods which reduce soil erosion, such as no till, limited till and contour plowing; these methods also reduce pesticide run-off. Use of vegetation filter strips along rivers, creeks, streams, wetlands or on the downhill side of fields where run-off could occur will minimize water run-off and is recommended.

DISPOSAL/DECONTAMINATION

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.

STORAGE:

Do not contaminate water, food or feed by 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. Do not store or transport near feed or food. Not for use or storage in or around the home. To prevent contamination, store this product away from food or feed.

RESISTANCE MANAGEMENT

For resistance management, please note that Fierce Herbicide is both a Group 14 and a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to Fierce Herbicide and other Group 14 and/or Group 15 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 Fierce Herbicide or other Group 14 and /or Group 15 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 and to report suspected resistance, contact Valent Canada at 519-767-9262.

GENERAL DIRECTIONS FOR USE

When used in accordance with this label, Fierce Herbicide:

- Provides residual control of susceptible weeds in soybean and fallow land.
- Provides additional burndown activity when used as part of a burndown program in soybean and fallow land.
- Can be used on farms for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed free.
- Can be used to maintain bareground in non-crop areas.

Moisture is necessary to activate Fierce Herbicide in soil for residual weed control. When adequate moisture is not received after a Fierce Herbicide application, weed residual control may be improved by irrigation with at least 1.25 cm of water. Dry weather following applications of Fierce Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, Fierce Herbicide will control susceptible germinating weeds. Fierce Herbicide may not control weeds that germinate after application but before an activating rainfall/irrigation or weeds that germinate through cracks resulting from dry soil.

Burndown Application

Apply Fierce Herbicide as part of a burndown program to actively growing weeds. Applying Fierce Herbicide under conditions that do not promote active weed growth will reduce herbicide effectiveness. Do not apply Fierce Herbicide when weeds are under stress due to drought, excessive water, temperature extremes, disease or low humidity. Weeds under stress tend to become less susceptible to herbicidal action. Fierce Herbicide is most effective when applied under warm sunny conditions.

Reduced residual weed control may occur when burndown applications are made to fields where heavy crop and/or weed residue exist.

Rainfastness

Fierce Herbicide is rainfast one hour after application. Do not apply Fierce Herbicide if rain is expected within one hour of application or postemergence efficacy may be reduced.

Soil Characteristics

Application of Fierce Herbicide to soils with high organic matter and/or high clay content may require higher dosages than soils with low organic matter and/or low clay content. Application to cloddy seedbeds can result in reduced weed control.

CROP FAILURE

If the crop treated with Fierce Herbicide is lost due to a catastrophe, such as hail or other forms of inclement weather, soybeans can be replanted immediately, provided no more than 315 g/ha of Fierce Herbicide have been used on the lost crop. Crop injury may occur if these restrictions are not followed.

GENERAL USE PRECAUTIONS

- Do not apply this product when weather conditions favor spray drift from treated areas.
- Do not apply during low-level inversion conditions, including fog.
- Do not graze treated fields or feed treated forage or hay to livestock.

- Do not apply by air.
- Do not apply to frozen or snow covered soil.
- Mechanical incorporation into the soil will reduce residual weed control.
- 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.

APPLICATION INFORMATION

Spray equipment used to apply Fierce Herbicide should not be used to apply other materials to any crop foliage, unless the proper cleanout procedure is followed. See “SPRAYER CLEANUP” for more information.

SPRAYER PREPARATION

Before applying Fierce Herbicide, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. Some pesticides, including but not limited to, the sulfonyleurea and phenoxy herbicides are active at very small amounts and can cause crop injury when applied to susceptible crops. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply Fierce Herbicide. If two or more products were tank mixed prior to Fierce Herbicide application, the most restrictive cleanup procedure should be followed.

MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. To ensure a uniform spray mixture, pre-slurry the required amount of Fierce Herbicide with water prior to addition to the spray tank. Use a minimum of 3.8 litres (1 gallon) of water per 283 g (10 oz) of Fierce Herbicide.
3. While agitating, slowly add the pre-slurried Fierce Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
4. If tank mixing Fierce Herbicide with other labeled herbicides, add water soluble bags first, followed by dry formulations, flowables, emulsifiable concentrates and then solutions. Prepare no more spray mixture than is required for the immediate spray operation.
5. Add any required adjuvants.
6. Fill spray tank to desired level with water. **Agitation should continue until all spray solution has been applied.**
7. Mix only the amount of spray solution that can be applied the day of mixing. Fierce Herbicide should be applied within 6 hours of mixing.

APPLICATION METHOD

Fierce Herbicide is applied by ground. Application equipment should be clean and in good repair. Nozzles should be uniformly spaced on boom and frequently checked for accuracy. Apply Fierce Herbicide, and Fierce Herbicide tank mixes, with ground equipment using standard commercial sprayers equipped with flat fan (preplant or preemergence applications only) designed to deliver the desired spray pressure and spray volume.

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

CARRIER VOLUME AND SPRAY PRESSURE

Preemergence Application (Conventional Tillage): To ensure uniform coverage, use 100 to 300 L of spray solution per hectare for conventional tillage applications. Nozzle selection should meet manufacturer's volume and pressure recommendations for preemergence herbicide application.

Burndown Application (Prior to Crop Emergence): To ensure thorough coverage in burndown applications, use 150 to 600 L spray solution per hectare. Use 200 to 600 L per hectare if dense vegetation or heavy crop residue is present. Nozzle selection should meet manufacturer's volume and pressure recommendations for postemergence herbicide application. Do not use flood jet nozzles.

SPRAYER CLEANUP

Spray equipment, including mixing vessels and nurse tanks, must be cleaned each day following Fierce Herbicide application. After Fierce Herbicide is applied, the following steps must be used to clean the 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. Top off tank, add 3.8 litres of 3% household ammonia (or equivalent) for every 378.5 L of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes. If diaphragms are being used on the spray boom, loosen diaphragms before flushing the spray system, allowing cleaning solution to spray through the open diaphragm. If spray lines have any end caps, they must be loosened before flushing the system, allowing cleaning solution to spray through the loosened caps. To enhance removal of Fierce Herbicide from the spray system, add a tank cleaner in place of ammonia and allow the cleaning solution to remain in the pressurized spray system (spray tank, hoses and boom) for 8 hours before flushing the system for a minimum of 15 minutes.
4. Drain tank completely.
5. Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 2 minutes.
6. Remove all nozzles and screens and rinse them in clean water.

Spray equipment, including all tanks, hoses, booms, screens and nozzles, should be thoroughly cleaned before it is used to apply postemergence pesticides. Equipment with Fierce Herbicide residue remaining in the system may result in crop injury to the subsequently treated crop.

BUFFER ZONES:

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

For application to rights-of-way (such as bareground to railroad beds, under guard rails, above-ground pipelines, road surfaces and gravel shoulders) buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies which minimize off-site drift, including meteorological conditions (e.g., wind directions, low wind speed) and spray equipment (e.g., coarse droplet sizes, minimizing height above canopy), should be used.

Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats.

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), sensitive aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, wetlands) and estuarine/marine habitats.

Method of application	Crop	Buffer Zones (metres) Required for the Protection of:				
		Freshwater Habitat of Depths:		Marine Habitat of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer	Bare ground on non-crop areas	5	3	5	3	20*
	Soybean and fallow land	4	2	3	2	10

* Buffer zones for the protection of terrestrial habitats are not required for use on rights-of-way including bare ground to railroad beds, under guard rails, above ground pipelines, road surfaces and gravel shoulders.

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 RESTRICTIONS

The following rotational crops may be planted after applying Fierce Herbicide at the listed rate range. Planting earlier than the recommended rotational interval may result in crop injury.

Fierce Herbicide rate	Crops	Rotational Intervals
210-315 g/ha	Soybean	Immediately
	Field corn	9 months
	Successful soil bio-assay must be performed prior to planting crops not listed above.	

DIRECTIONS FOR USE IN SOYBEAN (Pre-Plant and Preemergence)

TIMING TO SOYBEANS

Fierce Herbicide may be applied to soybeans early pre-plant, prior to planting or preemergence (after planting). Preemergence application of Fierce Herbicide must be made within 3 days after planting and prior to soybean emergence. Application after the soybeans have begun to crack, or are emerged, will result in severe crop injury. Application should not be made when soybeans have begun to crack.

USE PRECAUTIONS

- Do not apply more than 315 g of Fierce Herbicide per hectare during a single growing season.
- Do not use Fierce Herbicide in soybeans in the same field that flufenacet, alachlor, metolachlor or dimethenamid will be used preemergence, or soybean injury may occur.
- Do not irrigate when soybeans are cracking.
- Moisture is necessary to activate Fierce Herbicide in soil for residual weed control. Dry weather following applications of Fierce Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, Fierce Herbicide will control susceptible germinating weeds. Fierce Herbicide may not control weeds that germinate after application but before an activating rainfall/irrigation or weeds that germinate through cracks resulting from dry soil.
- When adequate moisture is not received after a Fierce Herbicide application, weed control may be improved by irrigation with at least 1.5-2.5 cm of water. If there is mechanical incorporation into the soil or if emerged weeds are controlled by cultivation, residual weed control will be reduced.

Important: Crop injury may occur from applications made to poorly drained soils and/or applications made under cool, wet conditions. Severe crop injury will result when soils are flooded following application of Fierce Herbicide. Risk of crop injury can be minimized by using on well drained soils, planting soybeans at least 4 cm deep, using high quality seed and completely covering seeds with soil prior to preemergence applications. Treated soil that is splashed onto newly emerged crops may result in temporary crop injury.

Table 1. Weeds Controlled by Fierce Herbicide in Soybeans and Fallow Land

WEEDS CONTROLLED	RATE (g/ha)	COMMENTS
Common lamb's-quarters (<i>Chenopodium album</i>) Common ragweed (<i>Ambrosia artemisiifolia</i>) Common Waterhemp (<i>Amaranthus tamariscinus</i>) Dandelion (<i>Taraxacum officinale</i>) Eastern black nightshade (<i>Solanum ptycanthum</i>) Green foxtail (<i>Setaria viridis</i>) Green pigweed (<i>Amaranthus powellii</i>) Hairy nightshade (<i>Solanum sarachoides</i>) Large crabgrass (<i>Digitaria sanguinalis</i>) Palmer amaranth, (<i>Amaranthus palmeri</i>) Pennsylvania smartweed (<i>Polygonum pensylvanicum</i>) Redroot pigweed (<i>Amaranthus retroflexus</i>) Velvetleaf (<i>Abutilon theophrasti</i>) Wild buckwheat (<i>Polygonum convolvulus</i>) Wild mustard (<i>Sinapis arvensis</i>) Kochia (<i>Kochia scoparia</i>) Canada fleabane (<i>Conyza canadensis</i>)	210	Preemergence: Apply prior to weed emergence. Postemergence: When weeds are already emerged, apply Fierce Herbicide as a tank mix ¹ with a glyphosate product, present as isopropyl amine or potassium salt, at 1.2 kg a.i./ha.
Control of all weeds listed above	315	Use the 315 g/ha rate on fine-medium texture soils for season-long residual control

¹: Refer to the respective tank mix partner label for additional recommendations, restrictions and precautions. Follow the most restrictive application directions for each of the tank mix partners.

TANK MIX PARTNERS

Burndown Activity

Fierce Herbicide may be tank mixed with other herbicides for increased burndown activity, additional residual broadleaf and/or additional grass control. Completely read and follow the label of any potential tank mix partner with Fierce Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label. Refer to tank mix partner's label for adjuvant recommendations. Recommended tank mix partners include glyphosate, Liberty 200 SN, Gramoxone and Select.

Additional Residual Broadleaf and Grass Control

Fierce Herbicide can be tank mixed with other products for the control of annual broadleaf and grass weeds, such as FirstRate, Sencor, Lorox, Pursuit, Prowl and Classic. Do not apply with Axiom, Dual II Magnum, Boundary, Frontier, or Integrity or injury may occur.

Round Up Ready Program

Fierce Herbicide may be applied as part of a burndown program or preemergence in conventional tillage programs, at 210 to 315 g/ha, to reduce early season weed competition from labeled weeds in Roundup Ready programs. A sequential post emergence application of glyphosate will be required to control weeds not controlled by Fierce Herbicide.

DIRECTIONS FOR USE IN FALLOW LAND

Fierce Herbicide, at 210 to 315 g/ha, can be used in combination with labeled burndown herbicides to control emerged weeds and provide residual weed control. Weeds controlled by residual activity are listed in Table 1 (see above).

DIRECTIONS FOR USE TO MAINTAIN BARE GROUND ON NON-CROP AREAS OF FARMS

Use Fierce Herbicide for non-selective vegetation control to maintain bare ground on non-crop areas of farms that must be kept weed free.

Fierce Herbicide offers residual and postemergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. Fierce Herbicide can be tank mixed with the other herbicides for increased residual or postemergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase. Fierce Herbicide rates of 420 to 580 g/ha are required to provide residual control of the weeds listed in Table 2

USE PRECAUTIONS

- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply to ditch banks.
- Do not apply within 100 metres of non-dormant pears.
- Do not apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- Do not make more than one application per season.

PREEMERGENCE APPLICATION

Apply 420 to 580 g/ha of Fierce Herbicide as a preemergence application. Preemergence applications of Fierce Herbicide must be completed prior to weed emergence. Moisture is necessary to activate Fierce Herbicide on soil for residual weed control. Dry weather following application of Fierce Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, Fierce Herbicide will control susceptible germinating weeds.

POSTEMERGENCE APPLICATION

Apply 420 to 580 g/ha of Fierce Herbicide plus an adjuvant (0.25% v/v non-ionic surfactant) as a postemergence application. The addition of an adjuvant enhances Fierce Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of Fierce Herbicide. Emerged weeds are controlled postemergence with Fierce Herbicide, however, translocation of Fierce Herbicide within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with Fierce Herbicide occurs when applied in combination with a surfactant to weeds less than 5 cm in height. A tank mix partner should be used in combination with Fierce Herbicide for the postemergence control of weeds less than 5 cm.

Table 2. Weeds Controlled by Fierce Herbicide in Non-Crop and Bareground Areas

WEEDS CONTROLLED	RATE (g/ha)	COMMENTS
Common lamb's-quarters (<i>Chenopodium album</i>) Common ragweed (<i>Ambrosia artemisiifolia</i>) Common Waterhemp (<i>Amaranthus tamariscinus</i>) Dandelion (<i>Taraxacum officinale</i>) Eastern black nightshade (<i>Solanum ptycanthum</i>) Green pigweed (<i>Amaranthus powellii</i>) Hairy nightshade (<i>Solanum sarachoides</i>) Palmer amaranth, (<i>Amaranthus palmeri</i>) Pennsylvania smartweed (<i>Polygonum pensylvanicum</i>) Redroot pigweed (<i>Amaranthus retroflexus</i>) Velvetleaf (<i>Abutilon theophrasti</i>) Wild buckwheat (<i>Polygonum convolvulus</i>) Wild mustard (<i>Sinapis arvensis</i>) Witchgrass (<i>Panicum capillare</i>) Green foxtail (<i>Setaria viridis</i>) Large crabgrass (<i>Digitaria sanguinalis</i>) Kochia (<i>Kochia scoparia</i>) Canada fleabane (<i>Conyza canadensis</i>)	420 - 580	Preemergence: Apply prior to weed emergence. Postemergence: When weeds are already emerged, apply Fierce Herbicide plus an adjuvant (0.25% v/v non-ionic surfactant) or in a tank mix ¹ Use the higher rates on fine-medium texture soils for longer residual control.

¹: Refer to the respective tank mix partner label for additional recommendations, restrictions and precautions. Follow the most restrictive application directions for each of the tank mix partners.

TANK MIX PARTNERS: Completely read and follow the label of any potential tank mix partner with Fierce Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label. Recommended tank mix partners include glyphosate, 2,4-D, Ester and Liberty 200 SN .

DIRECTIONS FOR USE TO MAINTAIN BARE GROUND ON FOR INDUSTRIAL VEGETATION MANAGEMENT (IVM)

Fierce Herbicide, when used as directed, can be used for non-selective vegetation control to maintain bare ground non-crop areas that must be kept weed-free. Apply Fierce Herbicide to:

- Bare ground under guardrails, above-ground pipelines, railroad beds, railroad yards and surrounding areas
- Bare ground in parking and storage areas, plant sites, substations, pumping stations, and tank farms
- Bare ground areas of airports, brickyards, industrial plant sites, lumber yards and military installations, and storage areas
- Bare ground around farm buildings and along fencerows
- Road surfaces, improved roadside areas and gravel shoulders

USE PRECAUTIONS

- Do not apply when weather conditions favor spray drift from treated areas.
- Do not apply to ditch banks.
- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation.
- Do not apply within 100 metres of non-dormant pears.

- Do not apply to powdery soils or soils that are susceptible to wind displacement unless irrigation can be applied immediately after application.
- Do not make more than one application per season.

Fierce Herbicide offers residual and postemergence control of susceptible broadleaf and grass weeds as well as an additional mode of action to assist in the control of ALS (acetolactate synthase) resistant weeds. Fierce Herbicide can be tank mixed with other herbicides for increased residual or postemergence control. The length of residual control is dependent on the rate applied as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase. Fierce Herbicide at 420- 580 g/ha is required to provide residual control of the weeds listed in Table 2.

TIMING TO WEEDS

PREEMERGENCE APPLICATION

Apply 420 – 580 g/ha of Fierce Herbicide as a preemergence application. Preemergence applications of Fierce Herbicide should be made to a weed-free soil surface. Preemergence applications of Fierce Herbicide must be completed prior to weed emergence. Moisture is necessary to activate Fierce Herbicide on soil for residual weed control. Dry weather following application of Fierce Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, Fierce Herbicide will control susceptible germinating weeds.

POSTEMERGENCE APPLICATION

Apply 420 – 580 g/ha of Fierce Herbicide plus an adjuvant (0.25% v/v non-ionic surfactant) as a postemergence application. The addition of an adjuvant enhances Fierce Herbicide activity on emerged weeds. Thorough spray coverage is necessary to maximize the postemergence activity of Fierce Herbicide. Emerged weeds are controlled postemergence with Fierce Herbicide, however, translocation of Fierce Herbicide within a weed is limited, and control is affected by spray coverage and by the addition of an adjuvant. The most effective postemergence weed control with Fierce Herbicide occurs when applied in combination with a surfactant to weeds less than 5 cm in height. A tank mix partner should be used in combination with Fierce Herbicide for the postemergence control of weeds less than 5 cm.

TANK MIX PARTNERS: Completely read and follow the label of any potential tank mix partner with Fierce Herbicide. When using tank mixtures, use conditions must be in accordance with the most restrictive of the label limitations and precautions on either herbicide label. Recommended tank mix partners include 2,4-D Ester, Hyvar X-L, Krovar, Telar, Vanquish, Banvel, Karmex, Velpar, Arsenal, Tordon and Garlon

Fierce is a trademark of Valent U.S.A. Corporation

All other products mentioned are the trademarks or registered trademarks of their respective companies.

(Base-Container Label)

GROUP	14	15	HERBICIDES
--------------	-----------	-----------	-------------------

Fierce Herbicide

Wettable Granules
COMMERCIAL

**FOR CONTROL AND/OR SUPPRESSION OF CERTAIN WEEDS IN SOYBEAN,
FALLOW LAND AND NON CROP AREAS AROUND FARMS, AND TO MAINTAIN
BARE GROUND ON NON-CROP AREAS.**

GUARANTEE:	
Flumioxazin.....	33.5%
Pyroxasulfone.....	42.5%

<p>READ THE LABEL BEFORE USE</p> <p>KEEP OUT OF REACH OF CHILDREN</p>

REGISTRATION NO.: 31117 PEST CONTROL PRODUCTS ACT

WARNING
EYE AND SKIN IRRITANT

Net Contents: 500 g - Bulk

Valent Canada, Inc.
3 – 728 Victoria Road South
Guelph, ON N1L 1C6
Phone: 519-767-9262

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

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. 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.

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
1-800-892-0099***

TOXICOLOGICAL INFORMATION

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

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN. Harmful if inhaled or absorbed through the skin. Causes eye irritation. **DO NOT** get in eye. May irritate skin. Avoid contact with skin.

Follow mixer/loader and applicator scenario on attached label.

In addition, wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, socks and shoes, goggles or face shield during clean-up and repair activities.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE. Do not contaminate water when disposing of equipment washwaters.

This pesticide is toxic to plants and should be used strictly in accordance with the drift and run-off precautions on this label in order to minimize off-site exposures.

DISPOSAL/DECONTAMINATION

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.

STORAGE:

Do not contaminate water, food or feed by 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. Do not store or transport near feed or food. Not for use or storage in or around the home. To prevent contamination, store this product away from food or feed.