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Valtera™ Herbicide

HERBICIDE
Water Dispersible Granules
COMMERCIAL

Preemergence weed control in soybean and to maintain bare ground non-crop areas, including bare ground non-crop areas on farms. Also for dry bean desiccation.

GUARANTEE:
Flumioxazin.....51.1%

READ THE LABEL BEFORE USE

Warning: This product contains the allergen sulfite.

REGISTRATION NO.: 29230
PEST CONTROL PRODUCTS ACT

GROUP	14	HERBICIDE
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CAUTION - POISON

Net Contents: 2.27 kg

Valent Canada, Inc.
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Guelph, Ontario, Canada
N1G 5G3
www.valent.ca

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use this product in a way that is inconsistent with the directions on the label. 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. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

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

TOXICOLOGICAL INFORMATION

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

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN. Avoid breathing dust and spray mist. Avoid contact with skin, eyes or clothing. Harmful if inhaled.

Wear protective goggles or face-shield when handling the concentrated product. 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.

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 faceshield, during clean-up and repair activities.

Equipment	Personal Protective Equipment		Maximum amount of product handled per day (kg)
	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	37 kg
		Closed cab, long-sleeved shirt, long pants, socks and shoes. (No gloves are required, but must be present in the cab for maintenance)	
Right-of-Way sprayer	Chemical-resistant coveralls over long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Mixers and loaders must also wear goggles or faceshield.		7.0 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.		1.2 kg
Low-pressure Hand-held Equipment			0.315 kg

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 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 fine-textured soils.

Do not graze treated fields or feed treated forage or hay to livestock.

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 1-800-682-5368 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. Toxic to small wild mammals. Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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 Valtera Herbicide contains a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to Valtera Herbicide and other Group 14 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 Valtera Herbicide or other Group 14 herbicides with different herbicide groups that control the same weeds in the field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information and to report suspected resistance, contact Valent Canada, Inc. at 1-800-682-5368 or at www.valent.ca.

GENERAL INFORMATION

Valtera Herbicide provides residual control of susceptible weeds in soybean and to maintain bare ground non-crop areas on farms when used in accordance with this label. It also may be used as a dry bean desiccant. Valtera Herbicide is effective as a preemergence herbicide, for control of selected grass and broadleaf weeds. Valtera

Herbicide controls weeds by inhibiting protoporphyrinogen oxidase, an essential enzyme required by plants for chlorophyll biosynthesis. Seedling weeds are controlled preemergence when exposed to sunlight following contact with the soil applied herbicide. Preemergence weed control with Valtera Herbicide is most effective when applied to clean, weed-free soil surfaces. Disturbing soil surfaces may reduce herbicide efficacy.

Valtera Herbicide offers residual control of susceptible grass and broadleaf weeds listed on this label and assists in the control of acetolactate synthase (ALS) resistant weeds. The length of residual control is dependent on the application rate as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase and on soils of high organic matter and/or high clay content.

Rotational Restrictions

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

Valtera Herbicide Rate	Crop	Rotational Interval
140 g/ha	Soybean	Immediately
	Winter wheat	4 months
	Spring wheat	8 months
	Field corn, sunflower, sorghum, dry common beans ¹ , and Canola	9 months
	Alfalfa and barley	11 months
	All other crops not listed ²	12 months
210 g/ha	Soybean	Immediately
	Winter wheat	4 months
	Spring wheat	8 months
	Field corn, sorghum, dry common beans ¹ , and sunflower	9 months
	Alfalfa, barley, and canola	11 months
	All other crops not listed ²	12 months

¹ Common bean varieties vary in their tolerance to herbicides, including to Valtera Herbicide. Since not all common bean varieties grown as rotational crops have been tested for tolerance to Valtera Herbicide, first seeding common bean varieties to the field previously treated with Valtera Herbicide should be limited to a small area to confirm tolerance prior to adoption as a general field practice. Additionally, consult your seed supplier for information on the tolerance of specific varieties of common bean as a rotational crop seeded to field treated with Valtera Herbicide.

² Successful soil bioassay must be performed prior to planting crops not listed.

GENERAL DIRECTIONS FOR USE

SPRAYER AND APPLICATION INFORMATION

Apply using ground application equipment only. Before applying Valtera Herbicide, start with clean, well maintained application equipment. Nozzles should be uniformly spaced on

boom and frequently checked for accuracy. For broadcast application, apply Valtera Herbicide with ground equipment using standard commercial sprayers equipped with nozzles designed to deliver the desired spray pressure and spray volume. When banding, use proportionately less water and Valtera Herbicide per hectare.

Equipment with Valtera Herbicide residues remaining in the system may result in crop injury to the subsequently treated crop. Spray equipment used to apply Valtera Herbicide should not be used to apply other materials to any plant foliage. Spray equipment must be cleaned each day following Valtera Herbicide application. After Valtera 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. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
2. Top off tank, add 4 L of 3% household ammonia for every 400 L of water, circulate through sprayer for 5 minutes, and then flush all hoses, booms, screens and nozzles for a minimum of 15 minutes.
3. Drain tank completely.
4. Add enough clean water to the spray tank to allow all hoses, booms, screens and nozzles to be flushed for 3 minutes.
5. Remove all nozzles and screens and rinse them with clean water.
6. Do not contaminate water, food or feed by cleaning of equipment.

MIXING INSTRUCTIONS

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water. Engage gentle agitation.
 2. While agitating, slowly add Valtera Herbicide to the spray tank. Agitation should create a rippling or rolling action on the water surface.
 3. If tank mixing Valtera Herbicide with other labelled 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.
 4. Add adjuvants or surfactants, if recommended.
 5. Fill spray tank to desired level with water. **Agitation should continue until spray solution has been applied.**
 6. Mix only the amount of spray solution that can be applied the day of mixing. Valtera Herbicide should be applied within 6 hours of mixing.
- As this pesticide is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.
 - **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

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

DO NOT apply by air.

Use caution when applying under circumstances where possible drift to unprotected persons or food, forage or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption can occur.

Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much pressure.

Make application when the wind velocity favours on-target product deposition.

Do not make applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Avoid spraying during conditions of low humidity and/or high temperatures.

All ground application equipment must be properly maintained and calibrated using appropriate carriers.

BUFFER ZONES:

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

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), 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:		
		Aquatic Habitats of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	
Field Sprayer*	Soybean, dry beans	3	2	10
	Bare ground, non-crop	5	3	25

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

a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

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

DIRECTIONS FOR USE IN SOYBEAN

Valtera Herbicide offers residual control of susceptible broadleaf and grass weeds listed on this label and assists in the control of acetolactate synthase (ALS) resistant weeds. The length of residual control is dependent on the application rate as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase and on soils of high organic matter and/or high clay content.

Crop injury may occur from applications made to poorly drained soil and/or applications made under cool, wet conditions. Severe crop injury will result when soils are flooded following applications of Valtera Herbicide. Risk of crop injury can be minimized by using on well drained soils, planting 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.

Moisture is necessary to activate Valtera Herbicide in soil for residual weed control. Dry weather following applications of Valtera Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, Valtera Herbicide will control susceptible germinating weeds. Valtera 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 Valtera Herbicide application, weed control may be improved by irrigation with at least ½ cm of water. Weed control will be reduced if there is mechanical incorporation into the soil or if emerged weeds are controlled by cultivation.

If the crop treated with Valtera 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 210 g/ha of Valtera Herbicide was used on the lost crop. Crop injury may occur if these restrictions are not followed.

No-till planters that incorporate the soil during planting may result in decreased weed control in the row. When these types of planters are used, apply Valtera Herbicide within 3 days of planting and before soybeans emerge.

Do not perform any tillage operations after application or weed control will be reduced.

Apply only once during a single growing season.

APPLICATION TIMING

Valtera Herbicide provides preemergence control of susceptible weeds in soybeans. Apply Valtera Herbicide with ground equipment before planting, during planting, or after planting, but before the crop emerges. Do not apply by air. Apply using ground application equipment only.

Preemergence Applications

Valtera Herbicide may be applied to soybeans prior to planting or 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. At an application rate of 210 g/ha of Valtera Herbicide on medium-textured soils, soybean crop injury may be observed following application.

Burndown Applications

Valtera Herbicide, applied as part of a burndown program, may be used for residual weed control where soybeans will be planted directly into a stale seedbed, cover crop, or in previous crop residues. For control of emerged weeds, tank mix with glyphosate, present as the isopropyl amine or potassium salt. Reduced weed control may occur when burndown applications are made to fields where heavy crop and/or weed residue exist.

SOYBEAN– Application Rates and Weed Claims			
WEEDS CONTROLLED	Soil Type¹	RATE (g/ha)	COMMENTS
Redroot pigweed (<i>Amaranthus retroflexus</i>) Green pigweed (<i>Amaranthus powellii</i>) Common ragweed (<i>Ambrosia artemisiifolia</i>) Common lamb's-quarters (<i>Chenopodium album</i>) Hairy nightshade (<i>Solanum sarachoides</i>) Dandelion (<i>Taraxacum officinale</i>) Eastern black nightshade (<i>Solanum ptycanthum</i>)	Coarse-textured, with <5% organic matter	140	Preemergence: Apply prior to weed emergence.
<i>Suppression only:</i> Green foxtail (<i>Setaria viridis</i>)	Medium-textured, with <5% organic matter	210	Postemergence: When weeds are already emerged, apply Valtera Herbicide as a tank mix ² with a glyphosate product, present as isopropyl amine or potassium salt, at 1.2 kg a.i./ha.

¹: Do not apply on soils with > 5% OM, or fine-textured soils.

²: 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.

DIRECTIONS FOR USE IN BARE GROUND NON-CROP AREAS

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

Moisture is necessary to activate Valtera Herbicide in soil for residual weed control. Dry weather following applications of Valtera Herbicide may reduce effectiveness. However, when adequate moisture is received after dry conditions, Valtera Herbicide will control

susceptible germinating weeds. Valtera 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 Valtera Herbicide application, weed control may be improved by irrigation with at least ½ cm of water. Weed control will be reduced if there is mechanical incorporation into the soil or if emerged weeds are controlled by cultivation.

Valtera Herbicide offers residual control of susceptible broadleaf and grass weeds listed on this label and assists in the control of acetolactate synthase (ALS) resistant weeds. The length of residual control is dependent on application rate as well as on rainfall and temperature conditions. Length of residual control will decrease as temperature and precipitation increase and on soils with high organic matter and/or high clay content.

- Do not apply by air. Ground application only.
- Do not apply to fine-textured soils.
- 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.
- Apply only once per growing season

BARE GROUND NON-CROP AREAS - Application Rates and Weed Claims			
WEEDS CONTROLLED	Soil Type¹	RATE (g/ha)	COMMENTS
Redroot pigweed (<i>Amaranthus retroflexus</i>) Green pigweed (<i>Amaranthus powellii</i>) Common ragweed (<i>Ambrosia artemisiifolia</i>) Common lamb's-quarters (<i>Chenopodium album</i>) Green foxtail (<i>Setaria viridis</i>) Hairy nightshade (<i>Solanum sarachoides</i>) Dandelion (<i>Taraxacum officinale</i>) Eastern black nightshade (<i>Solanum ptycanthum</i>)	Coarse-textured, with <5% organic matter	280	Preemergence: Apply prior to weed emergence, in sufficient water for uniform coverage. Postemergence: When weeds are already emerged, apply Valtera Herbicide as a tank mix ² with a glyphosate, product present as isopropyl amine or potassium salt, at 1.2 kg a.i./ha
	Medium-textured, with <5% organic matter	420	

¹: Do not apply on soils with > 5% OM, or fine-textured soils.

²: 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.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR

THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the use described in this section of the label were developed by persons other than Valent U.S.A. Corporation and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Valent U.S.A. Corporation itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used in accordance with the use described below.

Accordingly, the Buyer and User assumes all risks related to performance and crop tolerance arising, and agree to hold Valent U.S.A Corporation and Valent Professional Products harmless from any claims based on efficacy and/or phytotoxicity in connection with the use described below.

DIRECTIONS FOR USE AS A HARVEST AID IN DRY BEAN (*Phaseolus vulgaris* L.)

General Restriction and Limitations

- For use as a desiccant, do not apply more than 105 g/ha of Valtera Herbicide.
- Do not harvest within 5 days of application.
- Do not apply more than a single application of 105g/ha of Valtera Herbicide during a growing season.

Application Rate and Timing

Apply Valtera Herbicide at a rate of 105 g/ha plus methylated seed oil (MSO Concentrate) at a rate of 2.5 L/ha when crop is mature. Dry bean can be harvested 5 days after application.

Valtera Herbicide alone treatment does not desiccate large weeds present in the field; tank mixing Valtera Herbicide 105 g/ha + MSO at 2.5 L/ha with glyphosate present as isopropyl amine or potassium salt at 900 g a.e./ha increases control of emerged weeds and aids in harvest. If applying with glyphosate herbicide, do not harvest dry beans within 7 days of application, as per the glyphosate use directions.

To ensure thorough coverage, use 140-280 L spray solution per hectare. Nozzle selection should meet manufacturer's recommendation for post-emergence application.

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

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