

2023-03-29
2023-0580
Container Label



VIKING™ Risor Herbicide

GROUP	2	HERBICIDE
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SOLUBLE GRANULE

COMMERCIAL (AGRICULTURAL)

FOR SALE FOR USE ON WHEAT (SPRING, WINTER AND DURUM) AND SPRING BARLEY

REGISTRATION NO. 34792 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENTS:

Thifensulfuron-methyl25%

Tribenuron-methyl.....25%

Warning, contains the allergen sulfites

NET CONTENTS: 200 grams – 25 Kg

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

POTENTIAL SKIN SENSITIZER

**In case of emergency call the 24 hour Emergency Response Number 1-800-424-9300 or
1-703-527-3887**

Viking Crop Production Partners Inc.

Box 18033

RPO Shawnessy

Calgary, AB. T2Y 0K3

1-587-743-1029

Viking (TM) is a trademark of Viking Crop Production Partners Inc.

PRECAUTIONS:

- POTENTIAL SKIN SENSITIZER
- KEEP OUT OF REACH OF CHILDREN.
- AVOID BREATHING SPRAY MIST. USE WITH ADEQUATE VENTILATION.
- AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WEAR GOGGLES OR FACE SHIELD, LONG-SLEEVED SHIRT, LONG PANTS, SOCKS, COVERALLS, AND CHEMICAL RESISTANT GLOVES AND FOOTWEAR DURING MIXING, LOADING, APPLICATION CLEAN UP AND REPAIR. CHEMICAL RESISTANT GLOVES ARE NOT REQUIRED WHILE OPERATING GROUNDBOOM SPRAYERS.
- DO NOT CONTAMINATE ANY BODY OF WATER.
- MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES EYE AND SKIN IRRITATION.
- WHEN USING, DO NOT EAT, DRINK OR SMOKE. WASH SKIN THOROUGHLY WITH SOAP AND WATER AFTER HANDLING.
- REMOVE CONTAMINATED CLOTHING IMMEDIATELY AFTER USE. STORE AND WASH CONTAMINATED CLOTHING SEPARATELY FROM HOUSEHOLD LAUNDRY BEFORE REUSE.
- DO NOT USE HUMAN FLAGGERS.
- DO NOT ENTER OR ALLOW WORKER RE-ENTRY FOR 12 HOURS AFTER APPLICATION.

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 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 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.

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

TOXICOLOGICAL INFORMATION:

Treat symptomatically.

ENVIRONMENTAL PRECAUTIONS:

TOXIC to plants, aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

STORAGE:

Store this product away from food or feed. Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

DISPOSAL:**For Recyclable Container**

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.
2. Add the rinsing's to the spray mixture in the tank.
3. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

If this is a refillable container:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

If this is a returnable container:

Do not reuse this container for any other purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

For all package types:

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.

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.

Booklet Label



VIKING™ Risor Herbicide

GROUP	2	HERBICIDE
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SOLUBLE GRANULE

COMMERCIAL (AGRICULTURAL)

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IF SWALLOWED:

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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.

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

TOXICOLOGICAL INFORMATION:

Treat symptomatically.

STORAGE:

Store this product away from food or feed. Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

DISPOSAL:**For Recyclable Container**

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.
2. Add the rinsing's to the spray mixture in the tank.
3. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

If this is a refillable container:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

If this is a returnable container:

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For all package types:

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.

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.

ENVIRONMENTAL PRECAUTIONS:

- TOXIC to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.
- 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 filter strip between the treated area and the edge of the water body.

PRODUCT DESCRIPTION:

VIKING Risor Herbicide is recommended for selective post-emergent control or suppression of broadleaf weeds in wheat (spring, winter and durum), and spring barley not underseeded to legumes or grasses, and in certain grasses for forage or seed production.

VIKING Risor Herbicide is a 50% active ingredient herbicide formulated as a water soluble granule. It is non-corrosive, non-flammable, non-volatile and does not freeze.

VIKING Risor Herbicide is to be mixed with water and a recommended adjuvant and applied as a uniform broadcast spray. Recommended adjuvants are: AGRAL® 90, AG-SURF®, CITOWETT® PLUS, LIBERATE® ADJUVANT, AG-SURF® II, HIACTIVATE™ NON-IONIC LIQUID SPREADER/ACTIVATOR, SUPER SPREADER ADJUVANT AND ENHANCE™. Apply early postemergence, to the main flush of actively growing broadleaf weeds.

Warm, moist growing conditions promote active weed growth and enhance the activity of **VIKING Risor Herbicide** by allowing maximum foliar uptake and contact activity. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and regrowth may occur. For best results, ensure thorough spray coverage of target weeds. See "DIRECTIONS FOR USE" section of this label for complete use details.

VIKING Risor Herbicide stops growth of susceptible weeds rapidly. However, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application, depending upon growing conditions and weed susceptibility. Degree of control and duration of effect are dependent on weed sensitivity, weed size, crop competition, growing conditions at and following treatment, and spray coverage.

IMPORTANT INFORMATION: READ BEFORE USING

Injury to or loss of desirable trees or vegetation may result from failure to observe the following:

- Do not apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- Do not use on lawns, walks, driveways, recreational grounds or similar areas.
- Carefully observe sprayer clean-up instructions, as spray tank residues may damage crops other than wheat and spring barley.
- 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.

REPLANTING TO OTHER CROPS:

Minimum Crop Rotation Guidelines:

Minimum Interval	Crop
2 months	Canola, Flax, Lentils, Alfalfa
Next crop year	All crops

GRAZING/HARVEST RESTRICTIONS:

Wheat or spring barley may not be grazed or fed to livestock within 7 days of application.

VARIETY RESTRICTIONS:

Limit use of **VIKING Risor Herbicide** to currently licensed varieties of wheat (spring, durum and winter) and spring barley. Consult Viking Crop Production Partners Inc. prior to use on unlicensed varieties for crop tolerance information. DO NOT USE ON LEGER SPRING BARLEY OR BELVEDERE WHEAT VARIETIES.

RAINFASTNESS INFORMATION:

Up to 25 mm of rain beginning 1 hour or more after spraying will not reduce the effectiveness of **VIKING Risor Herbicide**.

APPLICATION INFORMATION:

APPLICATION PRECAUTIONS:

- Do not apply to irrigated land where tail water will be used to irrigate cropland.
- Apply with an adjuvant registered for use with **VIKING Risor Herbicide**. Use only water as a carrier. Other carriers may accelerate breakdown of **VIKING Risor Herbicide** and reduce its effectiveness.
- Do not apply to crops underseeded to legumes or grasses as injury to forage may result.
- Application to crops that are stressed by severe weather conditions, frost, low fertility, water logged soil (soil at or near field capacity), disease or insect damage may result in crop injury. Drought, disease or insect damage following application may also result in crop injury.
- Under certain conditions, such as heavy rainfall, prolonged cool weather, frost or wide fluctuations in day/night temperatures, temporary lightening in crop colour, and occasionally, a slight reduction in crop height may occur.
- Do not apply more than 30 grams/hectare of **VIKING Risor Herbicide** per year.
- Apply only to agricultural crops when the potential for drift to areas of human habitation and areas of human activity (houses, cottages, schools and recreational areas) is minimal. Take into consideration wind speed, wind direction, temperature, application equipment and sprayer settings.

APPLICATION INSTRUCTIONS:

GROUND APPLICATION:

Apply the spray mixture uniformly with properly calibrated ground equipment. Ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended (minimum 55 litres spray volume per hectare). Use 50 mesh or larger filter screens (metal or nylon). A spray pressure of 210- 275 kPa is recommended. Avoid overlapping and shut off spray boom while starting, turning, slowing or stopping to prevent crop injury from over application.

AERIAL APPLICATION:

Apply only by fixed-wing or rotary aircraft equipment, which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions:

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

Operator Precautions:

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. It is desirable that the pilot have communication capabilities at each treatment site at the time of application. The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Product Specific Precautions:

Read and understand the entire label before opening this product. If you have questions, call the manufacturer (Viking Crop Production Partners Inc.) at 1-587-743-1029 or obtain technical advice from the distributor or your provincial agricultural representative.

Application of this specific product must meet and/or conform to the following: Apply a minimum of 25 L of spray volume per hectare. Apply a maximum of 50 L of spray volume per hectare.

DIRECTIONS FOR USE:

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 S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Aerial application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotorspan.

Spray Buffer zones:

Use of the following spray methods or equipment **DO NOT** require a spray buffer zone: hand-held or backpack sprayer, inter-row hooded sprayer, spot treatment, soil drench, and soil incorporation.

The spray 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, pastures, rangelands, riparian areas and shrub lands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application		Crop	Spray Buffer Zones (metres) Required for the Protection of:		
			Aquatic Habitats of Depths:		Terrestrial Habitats
			Less than 1m	Greater than 1 m	
Field sprayer*		Wheat (Spring, durum, and winter), spring barley	1	0	15
Aerial	Fixed wing		1	0	125
	Rotary wing		1	0	100

* For field sprayer application, spray 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 spray 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 spray buffer zone can be reduced by 30%.

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray 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.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

TANK MIXES WITH VIKING RISOR HERBICIDE

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Viking Crop Production Partners at 1-587-743-1029 for information before applying any tank mix that is not specifically recommended on this label.

When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on all product labels.

WHEAT (SPRING, WINTER AND DURUM) AND SPRING BARLEY

Tank Mixture:	VIKING Risor Herbicide	MCPA ESTER
Rate	30 g/ha	0.56 L/ha (MCPA Ester 500) OR 0.47 L/ha (MCPA Ester 600)
Crops	Spring wheat (including durum), winter wheat and spring barley	
Locations	No restrictions.	
Timing	Post-emergent application from full 3-leaf to just before flag leaf (shot blade) growth stage of crop.	
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding MCPA Ester. Then add MCPA Ester while continuing agitation. Refer to MIXING DIRECTIONS section for general directions. If antifoam agent is required, add last.	
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide alone, as well as white cockle, dandelion (spring and fall rosettes, up to 15cm in diameter, and volunteer group 2 tolerant canola varieties (e.g. Clearfield® canola varieties). Apply when volunteer canola is in the 2-4 leaf stage.	

WHEAT (SPRING, WINTER AND DURUM) AND SPRING BARLEY

Tank Mixture:	VIKING Risor Herbicide	Adjuvants:
		Agral 90, Ag-Surf, Citowett Plus, Liberate Adjuvant, Ag Surf II, HiActivate Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance
Rate	30 g/ha	2 litres/1000 litres spray solution
Crops	Spring wheat (including durum), winter wheat and spring barley	
Locations	No restrictions	
Timing	Post-emergent application from the 2-leaf stage to just before the flag leaf (shot blade) stage of wheat (including durum), winter wheat and barley, prior to head emergence, but before the crop canopy will prevent thorough coverage of target weeds. Do not apply after head has emerged. For best results, apply to young, actively growing weeds that are less than 10 cm in height or diameter. Thorough coverage of target weeds is essential.	
MIXING:	Mixing order is VIKING Risor Herbicide , and then add adjuvant while maintaining agitation. Antifoaming agent may be required. Refer to MIXING DIRECTIONS section for general instructions.	
Weeds controlled	Annual smartweed (green smartweed, lady's thumb), Cow cockle, Hemp-nettle, Kochia ³ , Lamb's-quarters, Redroot Pigweed, Stinkweed, Volunteer Rapeseed ¹ , Wild Buckwheat, Wild mustard	
Weeds Supressed	Canada thistle ²	
Notes:	<p>VIKING Risor Herbicide alone will not control group 2 tolerant canola varieties (e.g. Clearfield varieties.)</p> <p>²Apply when the majority of thistles have emerged and are actively growing. For best top growth control, apply before bud stage when thistles are no larger than 15 cm in height and before crop canopy prevents thorough coverage of weeds. A single application will effectively inhibit the ability of emerged thistles to compete with the crop. Later emerging thistles will not be controlled.</p> <p>VIKING Risor Herbicide alone will not control Group 2 resistant Kochia.</p>	

Tank Mixture:	VIKING Risor Herbicide	2,4-D Ester 700LV	Adjuvants:
			Agral 90, Ag-Surf, CITOWETT PLUS, Liberate Adjuvant, Ag-Surf II, HiActivate Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance
Rate	30 g/ha	0.6 L/ha (or 420 g/ha acid equivalent)	2 litres/1000 litres spray solution
Crops	Spring wheat (including durum), winter wheat and spring barley		
Locations	No restrictions.		
Timing	Post-emergent application from full 3-leaf to just before flag leaf (shot blade) growth stage of crop.		
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding 2,4-D. Then add 2,4-D while continuing agitation, then adjuvant. Refer to MIXING DIRECTIONS section for general directions. If antifoam agent is required, add last.		
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide alone, as well as weeds controlled by 2,4-D Ester.		

Tank Mixture:	VIKING Risor Herbicide	PERIMETER® II Herbicide	Adjuvants:
			Agral 90, Ag-Surf, CITOWETT PLUS, Liberate Adjuvant, Ag-Surf II, HiActivate Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance
Rate	30 g/ha	0.155 L/ha for control of cleavers (1- 4 whorls) and kochia (including Group 2 resistant biotypes)	2 litres/1000 litres spray solution
Crops	Spring wheat (including durum), winter wheat and spring barley		
Locations	No restrictions.		
Timing	Post-emergent application from 2-leaf to initiation of stem elongation of spring wheat (including durum) and spring barley. Apply to winter wheat in the spring from the 3 tiller stage to just before the flag leaf stage		
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding PERIMETER II Herbicide. Then add PERIMETER II Herbicide while continuing agitation, then adjuvant. Refer to MIXING DIRECTIONS section for general directions. If antifoam agent is required, add last.		
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide alone, as well as cleavers (1-6 whorl), kochia (including Group 2 resistant biotypes; seedling to 8-leaf stage).		

Tank Mixture:	VIKING Risor Herbicide	PERIMETER II Herbicide	MCPA ESTER
Rate	30 g/ha	0.21 L/ha	0.56 L/ha (MCPA Ester 500) OR 0.47 L/ha (MCPA Ester 600)
Crops	winter wheat and spring barley		
Locations	No restriction		
Timing	Post-emergent application from 3-leaf to initiation of stem elongation of spring barley. Apply to winter wheat in the spring from the 3 tiller stage to just before the flag leaf stage.		
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding PERIMETER II Herbicide. Add PERIMETER II Herbicide while continuing agitation, and then add the MCPA Ester. Refer to MIXING DIRECTIONS section for general directions. If antifoam agent is required, add last.		
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide alone, plus: Dandelion (spring and fall rosettes, up to 15 cm in diameter) Cleavers (1-6 whorl) Kochia (including Group 2 resistant biotypes; seedling to 8-leaf stage) Volunteer group 2 tolerant canola varieties (e.g. Clearfield canola varieties). Apply when volunteer canola is in the 2-4 leaf stage.)		

SPRING BARLEY ONLY

Tank Mixture:	VIKING Risor Herbicide	PERIMETER Herbicide	Adjuvants:
			Agral 90, Ag-Surf, CITOWETT PLUS, Liberate Adjuvant, Ag-Surf II, HiActivate Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance
Rate	30 g/ha	0.3 L/ha for cleavers and kochia (including Group 2 resistant biotypes)	2 litres/1000 litres spray solution
Crops	spring barley		
Locations	For use in the prairie provinces and Peace River Region of British Columbia only.		
Timing	Post-emergent application from 2-leaf to initiation of stem elongation of crop.		
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding PERIMETER Herbicide. Then add PERIMETER Herbicide while continuing agitation, then adjuvant. Refer to MIXING DIRECTIONS section for general directions. If antifoam agent is required, add last.		
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide alone, as well as kochia (including Group 2 resistant biotypes; seedling to 8-leaf stage) cleavers (1-4 whorl) (controlled by Perimeter alone)		

WHEAT (SPRING, DURUM) AND SPRING BARLEY

Tank Mixture:	VIKING Risor Herbicide	Banvel® II Herbicide or Banvel Dry EG Herbicide	Adjuvants:
			Agral 90, Ag-Surf, CITOWETT PLUS, Liberate Adjuvant, Ag-Surf II, HiActivate Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance
Rate	30 g/ha	110 – 145 mL/ha (Banvel II Herbicide) or 76 - 100 g/ha (Banvel Dry EG Herbicide)	2 litres/1000 litres spray solution
Crops	Spring wheat (including durum) and spring barley		
Locations	For use in the prairie provinces and Peace River Region of British Columbia only.		
Timing	Apply the tank mix from the 2-5 leaf stage wheat (including durum) and barley, and to kochia plants up to the 8-leaf stage. Expect superior results when kochia is small. Use the higher rate of Banvel II or Banvel Dry EG Herbicide when the majority of Kochia plants are at or near the 8-leaf stage, or when growing conditions are not favourable.		
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding Banvel II or Banvel Dry EG Herbicide. Refer to MIXING DIRECTIONS section for general directions.		
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide plus Group 2 resistance KOCHIA.		

Tank Mixture:	VIKING Risor Herbicide	Banvel II Herbicide or Banvel Dry EG Herbicide	2,4-D Ester LV700	Adjuvants:
				Agral 90, Ag-Surf, CITOWETT PLUS, Liberate Adjuvant, Ag-Surf II, HiActivate Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance
Rate	30 g/ha	110 – 145 mL/ha (Banvel II Herbicide) or 76 - 100 g/ha (Banvel Dry EG Herbicide)	0.6 L/ha (or 420 g/ha acid equivalent)	2 litres/1000 litres spray solution
Crops	Spring wheat (including durum) and spring barley			
Locations	For use in the prairie provinces and Peace River Region of British Columbia only.			
Timing	Apply the tank mix from the 3-5 leaf stage of wheat (including durum) and barley, and to kochia plants up to the 8-leaf stage. Expect superior results when kochia is small. Use the higher rate of Banvel II or Banvel Dry EG Herbicide when the majority of Kochia plants are at or near the 8-leaf stage, or when growing conditions are not favourable.			
MIXING:	Ensure that VIKING Risor Herbicide is dissolved before adding Banvel II or Banvel Dry EG Herbicide. Add 2,4-D Ester last. Refer to MIXING DIRECTIONS section for general directions.			
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide plus 2,4-D Ester, plus Group 2 resistance KOCHIA.			

SPRING WHEAT (EXCLUDING DURUM) AND SPRING BARLEY

Tank Mixture:	VIKING Risor Herbicide	AXIAL® 100 EC Herbicide	ADIGOR® Adjuvant
Rate	30 g/ha	600 mL/hectare	700 mL/hectare
Crops	Spring wheat (excluding durum) and spring barley only		
Locations	For use in the prairie provinces and Peace River Region of British Columbia only		
Timing	Post-emergent application from 1 leaf to flag leaf. For annual grass weeds, apply from 1 to 6-leaf stage, up to emergence of 4 th tiller.		
MIXING:	Ensure that VIKING Risor Herbicide is completely dissolved. Then add Axial 100 EC Herbicide with reduced agitation, and finally either Adigor adjuvant. DO NOT USE ADDITIONAL NON-IONIC SURFACTANT. Refer to MIXING DIRECTIONS section for general instructions.		
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide alone, plus wild oats, volunteer oats, green foxtail, yellow foxtail, volunteer canary seed and proso millet.		
Notes:	Do not harvest within 60 days for grain and straw and 30 days for hay. Do not graze treated crop for 7 days after application. Consult AXIAL 100 EC Herbicide label for additional information on appropriate weed staging, application instructions, environmental and use precautions.		

FOR WEED CONTROL IN SPRING WHEAT ONLY

Tank Mixture:	VIKING Risor Herbicide	EVEREST® 70 DF or EVEREST SOLUPAK 70	2,4-D Ester LV700	Non-Ionic Surfactant
Rate	30 g/ha	43 grams/Ha	0.6 L/ha (or 420 g/ha acid equivalent)	2.5 L/1000 L (0.25 % v/v)
Crops	Spring wheat only			
Locations	For use in the prairie provinces and Peace River Region of British Columbia only			
Timing	Apply to spring wheat in the 3 to 4 leaf stage, plus 2 tillers; to wild oats and green foxtail in the 1-6 leaf stage (1-4 leaves on main stem, plus 2 tillers).			
MIXING:	Ensure that VIKING Risor Herbicide is completely dissolved. Add Everest Solupak 70 DF or Everest 70 DF while continuing agitation until these products are completely mixed. Reduce agitation, and add 2,4-D, and then adjuvant. Refer to MIXING DIRECTIONS section for general instructions.			
Weeds controlled	Broadleaf weeds controlled or suppressed by VIKING Risor Herbicide + 2,4-D, plus wild oats and green foxtail.			
Notes:	Observe minimum interval to harvest of 80 days after treatment. For black, dark brown and grey-wooded soil zones only, field peas may be grown the year following application in fields where precipitation has been normal or above normal (10 year average) during the growing season, and where organic matter content is above 4% and pH below 7.5. Re-crop spring wheat only in brown soil zone.			

MIXING INFORMATION: MIXING PRECAUTIONS:

If the sprayer has been left standing for a period of time agitate thoroughly to re-suspend the tank mix partner before resuming spraying. Spray preparation should be used within 24 hours or product degradation may occur.

MIXING DIRECTIONS:

Select a spray volume that will ensure thorough coverage and a uniform spray pattern. Use a minimum of 55 L of spray volume per hectare for ground application, and between 25 to 50 L of spray volume per hectare for aerial application. If tank mixing with other herbicides, always consult the label of the tank mix partner(s) for minimum spray volume requirements and apply the tank mixture using a water volume recommended for all products.

1. Always start with a clean and empty sprayer tank.
2. Fill the tank to 2/3 full of **clean** water.
3. With the agitator running, add the required amount of **VIKING Risor Herbicide**. Continue to agitate for a minimum of 5 minutes to ensure that **VIKING Risor Herbicide** is **completely** dissolved.
4. Make sure there are no un-dissolved granules, and then add the required amount of the tank mix partner. If the tank mix partner is an Emulsifiable Concentrate (EC), reduce agitation to avoid inducing an invert emulsion.
5. Add the rest of the water.
6. If required for the tank mixture, add the appropriate adjuvant. If an antifoam agent is required, add last.
7. Refer to the tank mix sections of this booklet for mixing order and other mixing instructions.
8. For repeat tank loads, reduce the material remaining in the tank to 10% of the original volume **or less** before proceeding with step 1, because remaining chemicals may prevent **VIKING Risor Herbicide** granules from completely dissolving or dispersing. If this is not possible, pre-slurry **VIKING Risor Herbicide** in a small amount (5-10 L) of water before adding to the tank.

SPECIAL MIXING INSTRUCTIONS FOR CHEMICAL HANDLERS

1. Ensure the chemical handler is clean (rinsed with ammonia).
2. For best results, add **VIKING Risor Herbicide** to the top of the sprayer tank.
3. If a chemical handler is used, make sure that all of the granules of **VIKING Risor Herbicide** are completely dissolved/dispersed and injected into the main tank with agitation before adding other chemicals.

4. Low water volumes in some chemical handlers can cause the water to become saturated with **VIKING Risor Herbicide**, leaving un-dissolved granules. In that case, rinse the chemical handler with clean water before adding any other chemical.
5. Always dissolve the **VIKING Risor Herbicide** granules with agitation in the main tank before adding a tank mix partner.

NOTE: Follow the clean-out procedure recommended for sprayer tanks for the chemical handler.

EQUIPMENT CLEANING INFORMATION:

CLEANING PRECAUTIONS:

CAUTION: Do not use ammonia with chlorine bleach. Using ammonia with chlorine bleach will release a gas with a musty chlorine odour, which may cause eye, nose, throat, and lung irritation. Do not clean equipment in an enclosed area.

DO NOT CLEAN SPRAYER NEAR WELL OR WATER SOURCE OR NEAR TO DESIRABLE VEGETATION.

CLEANING INSTRUCTIONS:

To avoid subsequent injury to crops other than wheat or spring barley, immediately after spraying and prior to spraying other crops, thoroughly remove all traces of **VIKING Risor Herbicide** from mixing and spray equipment as follows:

1. Drain tank and flush tank, boom and hoses with clean water. If boom is equipped with multiple nozzle bodies, be sure to rotate through all nozzles to ensure clean water reaches all parts of these assemblies.
2. Visually inspect tank to ensure removal of all visible herbicide residues. If necessary, repeat Step 1.
3. Fill the tank with clean water, and then add 1 litre household AMMONIA (containing minimum of 3% ammonia) or equivalent amount of a sprayer tank cleaner containing ammonia, per 100 litres of water. Ammonia will not neutralize the herbicide, but helps dissolve dried-on herbicide deposits. If an emulsifiable concentrate has been tank mixed with **VIKING Risor Herbicide**, use of a wetting agent in the cleaning process will assist in removing oily residue that may trap **VIKING Risor Herbicide** on the tank and hoses.
4. Flush solution through boom and hoses, and then add more water to completely fill tank. Allow to sit for 15 minutes with agitation.
5. Drain the tank.
6. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
7. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the hoses and boom.

RESISTANCE-MANAGEMENT RECOMMENDATIONS:

For resistance management, **VIKING Risor Herbicide** is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **VIKING Risor Herbicide** and other Group 2 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 **VIKING Risor Herbicide** or other Group 2 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 Viking Crop Production Partners Inc. at 1-587-743-1029 for further information.

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