

2023-2415
2024-10-02

PRINCIPAL DISPLAY PANEL

GROUP

2

HERBICIDE

PP-31155 HERBICIDE

SOLUBLE GRANULES

FOR SALE FOR USE ON WHEAT (SPRING AND DURUM) AND SPRING BARLEY IN THE
PRAIRIE PROVINCES AND THE INTERIOR OF BRITISH COLUMBIA

COMMERCIAL (AGRICULTURAL)

REGISTRATION NO. 29579 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENT: Thifensulfuron methyl 30.8%
Tribenuron methyl 15.4%
Metsulfuron methyl 4.6%

Warning, contains the allergen milk, sulfites
POTENTIAL SKIN SENSITIZER

NET CONTENTS: 200 grams – 25 kg

READ THE LABEL AND ACCOMPANYING BOOKLET BEFORE USING

FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
1-833-362-7722

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 LONG-SLEEVED SHIRT, LONG PANTS, SOCKS AND CHEMICAL-RESISTANT GLOVES AND FOOTWEAR DURING MIXING, LOADING, APPLICATION, CLEAN-UP AND REPAIR. IN ADDITION, WEAR GOGGLES OR FACE SHIELD DURING MIXING AND LOADING. 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.
- 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 APPLY BY AIR

FIRST AID:

In case of poisoning, contact a physician or a poison control centre.

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:

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

IN CASE OF EMERGENCY, CALL TOLL FREE, DAY OR NIGHT: 1-800-331-3148

TOXICOLOGICAL INFORMATION:

Treat symptomatically.

ENVIRONMENTAL PRECAUTIONS:

- TOXIC to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE. Refer to attached booklet for more information.

STORAGE:

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

DISPOSAL:

If this is a 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. Add the rinsings to the spray mixture in the tank.
2. 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/territorial 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 information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial 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.

DFU Booklet

GROUP

2

HERBICIDE

PP-31155 HERBICIDE

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FOR SALE FOR USE ON WHEAT (SPRING AND DURUM) AND SPRING BARLEY IN THE
PRAIRIE PROVINCES AND THE INTERIOR OF BRITISH COLUMBIA

COMMERCIAL (AGRICULTURAL)

REGISTRATION NO. 29579 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENT:	Thifensulfuron methyl	30.8%
	Tribenuron methyl	15.4%
	Metsulfuron methyl	4.6%

Warning, contains the allergen milk, sulfites

POTENTIAL SKIN SENSITIZER

READ THE LABEL AND THIS ACCOMPANYING BOOKLET BEFORE USING

FMC of Canada Limited
6755 Mississauga Road, Suite 204
Mississauga, ON L5N 7Y2
1-833-362-7722

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 LONG-SLEEVED SHIRT, LONG PANTS, SOCKS AND CHEMICAL-RESISTANT GLOVES AND FOOTWEAR DURING MIXING, LOADING, APPLICATION, CLEAN-UP AND REPAIR. IN ADDITION, WEAR GOGGLES OR FACE SHIELD DURING MIXING AND LOADING. 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.
- 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 APPLY BY AIR

FIRST AID:

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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:

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

IN CASE OF EMERGENCY, CALL TOLL FREE, DAY OR NIGHT: 1-800-331-3148

TOXICOLOGICAL INFORMATION:

Treat symptomatically.

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 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.
- Leaching: This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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PRODUCT DESCRIPTION:

PP-31155 Herbicide is recommended for selective post-emergent control or suppression of broadleaf weeds in wheat (spring and durum) and spring barley not underseeded to legumes or grasses.

PP-31155 Herbicide contains three active ingredients formulated as water soluble granules. It is non-corrosive, non-flammable, non-volatile and does not freeze.

PP-31155 Herbicide is to be mixed with water and a recommended adjuvant and applied as a uniform broadcast spray. Recommended adjuvants are: AGRAL90*, 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. APPLY WITH GROUND EQUIPMENT ONLY.

Warm, moist growing conditions promote active weed growth and enhance the activity of PP-31155 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.

PP-31155 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.
- Prevent drift of spray to desirable plants.
- Do not contaminate any body of water, including irrigation water that may be used on other crops.
- Carefully observe sprayer clean-up instructions, as spray tank residues may damage crops other than wheat and spring barley.

REPLANTING TO OTHER CROPS:

The following crops may be seeded 10 months after application: Canola, dry beans, faba beans, field corn, flax, oats, peas and soybeans.

The following crops may be seeded 22 months after application: Lentils.

Make only one application of PP-31155 Herbicide per season.

GRAZING/HARVEST RESTRICTIONS:

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

VARIETY RESTRICTIONS:

Limit the use of PP-31155 Herbicide to currently licensed varieties of wheat (spring, durum, winter) and spring barley. Consult FMC prior to use on unlicensed varieties for crop tolerance information. **DO NOT USE ON LEGER SPRING BARLEY OR BELVEDERE WHEAT VARIETIES.**

RAINFALL INFORMATION:

Up to 25 mm of rain beginning 1 hour or more after spraying will not reduce the effectiveness of PP-31155 Herbicide.

APPLICATION INFORMATION:

APPLICATION PRECAUTIONS:

- DO NOT APPLY BY AIR.
- Do not apply to irrigated land where tail water will be used to irrigate cropland.
- Apply with an adjuvant registered for use with PP-31155 Herbicide. Use only water as a carrier. Other carriers may accelerate breakdown of PP-31155 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 remove soil from treated fields for use on lawns, in gardens or for back fill.
- Do not apply more than 32.5 grams/hectare of PP-31155 Herbicide per year.
- DO NOT enter or allow worker entry into treated areas during the restricted (REI) of 12 hours.
- Apply only to agricultural crops when the potential for drift to areas of human habitation and areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversion, application equipment and sprayer settings.

APPLICATION INSTRUCTIONS:

Apply the spray mixture uniformly with properly calibrated ground equipment only. 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.

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.

Spray Buffer zones:

A spray buffer zone is NOT required for:

- uses with hand-held application equipment permitted on this label,
- low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage,
- soil drench or 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, 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	Spray Buffer Zones (metres) Required for the Protection of:		
	Aquatic Habitats of Depths:		Terrestrial Habitats
	Less than 1 m	Greater than 1 m	
Field sprayer	1	1	15

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.

DIRECTIONS FOR USE:

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.

TANK MIXES:

This product may be tank mixed 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 FMC of Canada Limited at 1-833-362-7722 for information before applying any tank mix that is not specifically recommended on this label.

WHEAT (SPRING, DURUM) AND SPRING BARLEY

PP-31155 HERBICIDE	
CROP(S): Wheat (spring, durum) and spring barley	
TIMING: Post-emergent application from the 2-leaf stage to just before the flag leaf (shot blade) stage of wheat (including durum) 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.	
APPLICATION RATES	
PP-31155 Herbicide	32.5 grams/hectare
Adjuvants: Agral [®] 90, Ag-Surf [®] , Citowett [®] Plus, Liberate [®] Adjuvant, Ag-Surf [®] II, HiActivate [®] Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance [®]	2 litres/1000 litres spray solution
MIXING: Mixing order is PP-31155 HERBICIDE, and then add adjuvant while maintaining agitation. Antifoaming agent may be required. Refer to MIXING DIRECTIONS section for general instructions.	
Weeds Controlled	Weeds Suppressed
Annual smartweed (green smartweed, lady's thumb)	Canada thistle ¹
Ball mustard	Cleavers (1-3 whorls)
Chickweed ²	Dandelion (spring and fall rosettes, less than 15 cm in diameter)
Corn spurry	Perennial sow thistle (top growth control) ¹
Cow cockle	Round leaved mallow ⁵
Flixweed	Scentless chamomile
Groundsel (common)	Toadflax ⁶
Hemp-nettle	
Kochia	
Lamb's-quarters	
Narrow-leaved hawk's beard	
Night flowering catchfly	
Redroot pigweed	
Russian thistle	
Shepherd's purse	
Stinkweed	
Stork's bill (2-6 leaf)	
Tartary buckwheat	
Volunteer rapeseed ³	
Volunteer sunflower	
Wild buckwheat ⁴	
Wild mustard	

Notes:

1. Apply when the majority of thistles have emerged and are actively growing. For best suppression of top growth, 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 suppressed.
2. Apply when chickweed is small (1-6 leaf) and actively growing, but before crop canopy prevents thorough coverage of weeds. Chickweed emerging after application will not be controlled.
3. PP-31155 Herbicide alone will not control imazethapyr tolerant canola varieties (e.g. Clearfield* varieties or other varieties with the Pursuit Smart* trait)
4. Apply to actively growing wild buckwheat in the cotyledon to 5-leaf stage. Under environmental stress, such as dry weather, control may be reduced. Large plants may regrow after treatment.
5. Apply to actively growing round leaved mallow from the 2-6 leaf stage (10-12 cm in height). PP-31155 Herbicide will keep mallow stunted, but may not reduce overall populations.
6. Apply to toadflax that is no larger than 15 cm in height. A control program for this weed includes both frequent tillage and chemical application.

PP-31155 Herbicide + MCPA	
CROP(S): Wheat (spring, durum) and spring barley	
TIMING: Post-emergent application from full 3-leaf to just before flag leaf (shot blade) growth stage of crop.	
TANK MIX COMPONENTS AND APPLICATION RATES	
PP-31155 Herbicide	32.5 grams/hectare
MCPA Amine or Ester 500	0.7-1.1 litres/hectare (350-560 grams acid equivalent/hectare) or 0.56 litres/hectare (280 grams acid equivalent/hectare).
OR	OR
MCPA Ester 600	0.58-0.9 litres/hectare (350-540 grams acid equivalent/hectare) or 0.47 litres/hectare (280 grams acid equivalent/hectare).
Adjuvants: Agral* 90, Ag-Surf* , Citowett * Plus, Liberate* Adjuvant, Ag-Surf* II, HiActivate* Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance*	2 litres/1000 litres spray solution
NOTE: Adjuvant not required when tank mixing with MCPA Ester.	
MIXING: Ensure that PP-31155 Herbicide is dissolved before adding MCPA. Then add MCPA with reduced agitation, then adjuvant (if required). Refer to MIXING DIRECTIONS section for general directions. If antifoam agent is required, add last.	

Weeds Controlled (MCPA Ester at 350-560 g ae/hectare)	
Annual smartweed (green smartweed, lady's thumb)	Stork's bill (2-6 leaf)
Ball mustard	Shepherd's purse
Burdocks (seedling)	Stinkweed
Cocklebur ²	Tartary buckwheat
Chickweed ³	Tumble mustard
Corn spurry	Volunteer rapeseed
Cow cockle	Wild buckwheat ⁴
Dandelion (spring and fall rosettes, less than 15 cm in diameter)	Wild mustard
False ragweed ²	Wild radish
Flixweed	Wormseed mustard
Giant ragweed ²	
Hare's-ear mustard	
Hemp-nettle	
Indian mustard	Weeds Suppressed
Kochia ²	Cleavers (1-3 whorls)
Lamb's-quarters	Round leaved mallow ⁵
Plantain (common)	Scentless chamomile
Prickly lettuce	Canada thistle ¹
Ragweed ²	Perennial Sow thistle (top growth control) ¹
Redroot pigweed	
Russian pigweed ²	
Russian thistle	
Weeds Controlled by MCPA Ester 500 at 0.56 litres/hectare or MCPA Ester 600 at 0.47 litres/hectare (280 grams acid equivalent/hectare)	
Weeds controlled or suppressed by PP-31155 Herbicide alone plus: - Volunteer imazamox and imazethapyr tolerant canola (e.g. Clearfield* canola: 2-4 leaf stage). - Dandelion (spring and fall rosettes, less than 15 cm in diameter) - Annual sow-thistle	

1. Apply when the majority of thistles have emerged and are actively growing. For best suppression of top growth, 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 suppressed.
2. Use minimum of 400 grams MCPA active ingredient per hectare.
3. Apply when chickweed is small (1-6 leaf) and actively growing, but before crop canopy prevents thorough herbicide coverage of weeds. Chickweed emerging after application will not be controlled.
4. Apply to actively growing wild buckwheat in the cotyledon to 5-leaf stage. Under environmental stress, such as dry weather, control may be reduced. Large plants may re-grow after treatment.
5. Apply to actively growing round leaved mallow from the 2-6 leaf stage (10-12 cm in height) PP-31155 Herbicide + MCPA will keep mallow stunted, but may not reduce overall populations.

PP-31155 Herbicide + 2,4-D AMINE OR ESTER	
CROP(S): Wheat (spring, durum) and spring barley	
TIMING: Post-emergent application from full 3-leaf to just before flag leaf (shot blade) growth stage of crop.	
TANK MIX COMPONENTS AND APPLICATION RATES	
PP-31155 Herbicide	32.5 grams/hectare
Choose one of the following:	
1. 2,4-D Amine 500	0.84-1.1 litres/hectare
2. 2,4-D Ester LV700	0.6-0.8 litres/hectare
3. 2,4-D Ester LV600	0.7-0.9 litres/hectare
Adjuvants: Agral* 90, Ag-Surf* , Citowett* Plus, Liberate* Adjuvant, Ag-Surf* II, HiActivate* Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance*	2 litres/1000 litres of spray solution
MIXING: Ensure that PP-31155 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	
Annual smartweed (green smartweed, lady's thumb)	Russian pigweed
Ball mustard	Russian thistle
Burdocks (seedling)	Shepherd's purse
Chickweed ²	Stinkweed
Cocklebur	Stork's bill (2-6 leaf)
Common ragweed	Tartary buckwheat
Corn spurry	Tumble mustard
Cow cockle	Volunteer rapeseed ³
False ragweed	Wild buckwheat ⁴
Flixweed	Wild mustard
Giant ragweed	Wild radish
Hare's-ear mustard	Wormseed mustard
Hemp-nettle	
Indian mustard	Weeds Suppressed
Kochia	Round leaved mallow ⁵
Lamb's-quarters	Scentless Chamomile
Plantain (common)	Toadflax ⁶ 2,4-D Ester only
Prickly lettuce	Canada thistle ¹
Redroot pigweed	Dandelion (spring and fall rosettes, less than 15 cm in diameter)
	Sow thistle ¹

1. Apply when the majority of thistles have emerged and are actively growing. For best suppression of top growth, apply before bud stage when thistles are no larger than 15 cm

- in height and before crop canopy prevents thorough coverage of weeds. PP-31155 Herbicide + 2,4-D will effectively inhibit the ability of emerged thistles to compete with the crop. Later emerging thistles will not be suppressed.
- Apply when chickweed is small (1-6 leaf) and actively growing, but before crop canopy prevents thorough herbicide coverage of weeds. Chickweed emerging after application will not be controlled.
 - For imazethapyr tolerant canola varieties (e.g. varieties with the Clearfield* or Pursuit Smart* traits) consult 2,4-D label for appropriate use rates.
 - Apply to actively growing wild buckwheat in the cotyledon to 5 leaf stage. Under environmental stress, such as dry weather, control may be reduced. Large plants may re-grow after treatment.
 - Apply to actively growing round leaved mallow from the 2-6 leaf stage (10-12 cm in height). PP-31155 Herbicide + 2,4-D will keep mallow stunted, but may not reduce overall populations.
 - Apply to toadflax that is no larger than 15 cm in height. A control program for this weed includes both frequent tillage and chemical application.

PP-31155 Herbicide® + BANVEL II* Herbicide or BANVEL* DRY Herbicide	
CROP(S): Spring wheat (including durum) and spring barley only, not underseeded to legumes	
TIMING: Post-emergent application from the 2-5 leaf stage of spring wheat or spring barley, and seedling stage to 8 leaf stage of kochia.	
TANK MIX COMPONENTS AND APPLICATION RATES	
PP-31155 Herbicide	32.5 grams/hectare
Banvel* II Herbicide	0.110 or 0.145 litres/hectare
or	or
Banvel* Dry Herbicide	76 or 100 grams/hectare
Adjuvants: Agral* 90, Ag-Surf* , Citowett* Plus, Liberate* Adjuvant, Ag-Surf* II, HiActivate* Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance*	2 litres/1000 litres of spray solution
MIXING: Ensure that PP-31155 Herbicide is completely dissolved. Add Banvel* II Herbicide or Banvel * Dry Herbicide with reduced agitation, then adjuvant. Refer to MIXING DIRECTIONS section for general instructions. Use minimum volume of 55 L/ha.	
WEEDS CONTROLLED	
Broadleaf weeds controlled or suppressed by PP-31155 Herbicide alone, as well as kochia (including Group 2 resistant kochia) and dandelion (spring and fall rosettes, less than 15 cm in diameter). Use the higher rate for the control of dandelion (spring and fall rosettes, less than 15 cm in diameter) and for kochia when the majority of kochia plants are at or near the 8 leaf stage, or when growing conditions are not favorable.	
NOTE: Do not permit lactating dairy animals to graze fields within 7 days after application.	

SPRING WHEAT (EXCLUDING DURUM) AND SPRING BARLEY

PP-31155 Herbicide + AXIAL*100 EC HERBICIDE	
CROP(S): Spring wheat (excluding durum) and spring barley.	
TIMING: Post-emergent application from 2-leaf to flag leaf. For annual grass weeds, apply from 1 to 6-leaf stage, up to emergence of 4 th tiller.	
TANK MIX COMPONENTS AND APPLICATION RATES	
PP-31155 Herbicide	32.5 grams/hectare
AXIAL* 100 EC Herbicide	600 mL/hectare
ADIGOR* Adjuvant Or MERGE* Adjuvant	700 mL/hectare
MIXING: Ensure that PP-31155 Herbicide is completely dissolved. Then add Axial* 100 EC Herbicide with reduced agitation, and finally either Adigor* or Merge* adjuvant. DO NOT USE ADDITIONAL NON-IONIC SURFACTANT. Refer to MIXING DIRECTIONS section for general instructions.	
WEEDS CONTROLLED	
Broadleaf weeds controlled or suppressed by PP-31155 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.	

PP-31155 Herbicide + AXIAL*100 EC HERBICIDE + MCPA Ester	
CROP(S): Spring wheat (excluding durum) and spring barley.	
TIMING: Post-emergent application from 3-leaf to flag leaf. For annual grass weeds, apply from 1 to 6-leaf stage, up to emergence of 4 th tiller.	
TANK MIX COMPONENTS AND APPLICATION RATES	
PP-31155 Herbicide	32.5 grams/hectare
AXIAL* 100 EC Herbicide	600 mL/hectare
MCPA Ester 500	560 mL/hectare for volunteer imazamox and imazethapyr tolerant canola (e.g. Clearfield canola; 2-4 leaf stage).
	700 mL/hectare for weeds controlled by MCPA Ester at this rate
OR	OR
MCPA Ester 600	470 mL/hectare for volunteer imazamox and imazethapyr tolerant canola (e.g. Clearfield canola) (2-4 leaf stage).
	580 mL/hectare for weeds controlled by MCPA Ester at this rate
ADIGOR* Adjuvant Or MERGE* Adjuvant	700 mL/hectare

MIXING: Ensure that PP-31155 Herbicide is completely dissolved. Then add Axial* 100 EC Herbicide with reduced agitation, then MCPA Ester and finally either Adigor* or Merge* adjuvant. DO NOT USE ADDITIONAL NON-IONIC SURFACTANT. Refer to MIXING DIRECTIONS section for general instructions. Refer to MIXING DIRECTIONS section for general instructions.

WEEDS CONTROLLED

Broadleaf weeds controlled or suppressed by PP-31155 Herbicide alone, as well as weeds controlled by MCPA ester 500 at 700 mL/ha (or MCPA ester 600 at 580 mL/ha), or volunteer imazamox and imazethapyr tolerant canola (e.g. Clearfield* canola)(2-4 leaf stage) when MCPA Ester 500 is applied at 560 mL/ha (or MCPA Ester 600 at 470 mL/ha), 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.

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.

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 PP-31155 Herbicide. Continue to agitate for a minimum of 5 minutes to ensure that PP-31155 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 PP-31155 Herbicide granules from completely dissolving. If this is not possible, pre-slurry PP-31155 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 PP-31155 Herbicide to the top of the sprayer tank.

3. If a chemical handler is used, make sure that all of the granules of PP-31155 Herbicide are completely dissolved 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 PP-31155 Herbicide, leaving un-dissolved granules. In that case, rinse the chemical handler with clean water before adding any other chemical.
5. Always dissolve the PP-31155 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 PP-31155 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 PP-31155 Herbicide, use of a wetting agent in the cleaning process will assist in removing oily residue that may trap PP-31155 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, PP-31155 Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to PP-31155 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 PP-31155 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 your local FMC representative or the FMC hotline at 1-833-361-7722 for further information.

STORAGE:

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

DISPOSAL:

If this is a 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. Add the rinsings to the spray mixture in the tank.
2. 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/territorial 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 information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial 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.

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