

2023-03-22  
2022-3039

**GROUP 2 HERBICIDE**

**(Container)**

ADAMA  
**Florasulam 50 SC Herbicide**  
**Suspension**

**FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA (INCLUDING PEACE RIVER REGION) ONLY**

A selective herbicide for postemergent control or suppression of annual broadleaved weeds including cleavers, wild buckwheat and chickweed in spring wheat (including durum), spring barley, and oats (tank mixes only).

COMMERCIAL (AGRICULTURAL)

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING  
KEEP OUT OF REACH OF CHILDREN

ACTIVE INGREDIENT: florasulam 50 g/L  
Contains 1,2-benzisothiazolin-3-one at 0.025% as a preservative

Warning, contains the allergen (soy)

REGISTRATION NO. 30814 PEST CONTROL PRODUCTS ACT

CAUTION



POISON

**MAY CAUSE SLIGHT EYE IRRITATION**

NET CONTENTS: 0.8L – bulk

For emergency medical help and health/safety inquiries call ProPharma Group at 1.877.250.9291 (24 hours a day)

For spill, leak or fire call INFOTRAC at 1.800.535.5053 (24 hours a day)

ADAMA Agricultural Solutions Canada Ltd.

300 – 191 Lombard Avenue

Winnipeg, Manitoba

R3B 0X1

1-855-264-6262

## **PRECAUTIONS:**

**MAY CAUSE SLIGHT EYE IRRITATION. KEEP OUT OF REACH OF CHILDREN. DO NOT APPLY BY AIR.**

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. Gloves are not required during application within a closed cab. **At completion of spraying or end of the day:** Take a shower immediately. Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing at the end of the work session and store and wash separately from household laundry using detergents and hot water before reuse. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**CAUTION:** Users of Florasulam 50 SC should check weather conditions prior to application of Florasulam 50 SC on crops. Crops can be more sensitive to herbicide application under certain stressful environmental conditions. For example, heavy rain after Florasulam 50 SC application that leaches the active ingredient florasulam into the root zone may cause crop injury, such as yellowing and stunting. In most cases, crops will outgrow the symptoms, but in severe situations reduced crop stand, yield, quality or delayed maturity may occur.

## **FIRST AID:**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

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

## **TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient.

## **AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

## **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.

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.

## **STORAGE**

Store in original containers in a secure, dry heated storage. Florasulam 50 SC Herbicide will freeze at -10°C. If product is frozen, bring to room temperature and agitate before use. Do not allow contamination of seeds, plants, fertilizers or other pesticides. Do not contaminate food, feedstuffs or domestic water supplies. If containers are damaged or spill occurs, use the product immediately or contain the spill with absorbent materials and dispose of waste. Store this product away from food or feed.

## **DISPOSAL**

### **Recyclable Containers:**

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.

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### **Returnable Containers:**

Do not reuse this container for any 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 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 any way that is inconsistent with the directions on the label.

(Booklet)

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## **GENERAL INFORMATION**

Florasulam 50 SC Herbicide is a selective postemergence herbicide for the control of hard-to-kill annual broadleaved weeds such as chickweed, wild buckwheat and cleavers in spring wheat (including durum), spring barley, and oats (tank mixes only) not underseeded with legumes. Florasulam 50 SC Herbicide is mixed with water and applied as a uniform broadcast spray. It is non-corrosive, nonflammable, and nonvolatile.

Florasulam 50 SC Herbicide must be applied early postemergence, to the main flush of actively growing broadleaved weeds. Warm, moist growing conditions promote active weed growth and enhance the activity of Florasulam 50 SC 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 re-growth may occur. For best results, ensure thorough spray coverage of target weeds. See “DIRECTIONS FOR USE” section of this label for complete use details.

Florasulam 50 SC Herbicide stops growth of susceptible weeds rapidly. However, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 2 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.

### **MODE OF ACTION**

Florasulam 50 SC Herbicide inhibits the production of the ALS enzyme in plants. This enzyme is essential for the production of certain amino acids which are essential for plant growth. Florasulam 50 SC Herbicide is a Group 2 mode of action herbicide.

### **GENERAL USE PRECAUTIONS**

#### **Sensitive Plants**

Do not apply Florasulam 50 SC Herbicide directly to, or otherwise permit it to come in direct contact with susceptible crops or desirable plants including alfalfa, edible beans, canola, flowers and ornamentals, lentils, lettuce, peas, potatoes, radishes, soybeans, sugar beets, sunflowers, tomatoes or tobacco.

#### **Non-Target Sites**

Do not apply where proximity of susceptible crops (e.g. canola and legumes) or other desirable plants is likely to result in exposure to spray or spray drift. See Environmental Precautions section of the label.

#### **Crop Rotation**

Fields previously treated with Florasulam 50 SC Herbicide can be seeded the following year to barley, canola, peas, wheat or fields can be summerfallowed.

Do not use in successive years at the same site.

This product has potential to leach. Do not apply excessive irrigation.

#### **Tank Mixtures**

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 ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262 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.

### **Spray Equipment Precaution**

Do not apply through any type of irrigation system.

### **DO NOT APPLY BY AIR.**

#### **To Reduce Spray Drift:**

1. Use nozzles delivering higher volumes and coarser droplets.
2. Use low pressures (200 to 275 kPa).
3. Use 100 L/ha of spray solution.
4. Spray when the wind velocity is 15 km/hr or less.
5. Spot treatments should only be applied with a calibrated boom to prevent over-application.

### **Equipment Clean-Up**

Equipment used to apply Florasulam 50 SC Herbicide should not be used to apply other pesticides to sensitive crops without thorough cleaning. To avoid subsequent injury to crops other than cereals, all spraying equipment must be thoroughly cleaned both inside and out, as follows:

1. Immediately after spraying, drain. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2. Rinse inside of tank with clean water and flush through booms and hoses using at least one tenth of the spray tank volume. Drain tank completely.
3. Add 1 L of household ammonia (containing a minimum of 3 % ammonia) per 100 L of water while filling the tank with clean water. Agitate and then briefly flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full and allow to stand for 15 minutes with agitation. Flush the boom and hoses and drain tank completely.
4. Remove nozzles and screens and clean separately with an ammonia solution (100 mL in 10 L water).
5. Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume. Drain tank completely.

**Note:** If it is not possible to drain the tank completely, step 3 must be repeated before going onto step 4.

**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.



## **DIRECTIONS FOR USE**

**READ THE ENTIRE LABEL BEFORE USE. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE. DO NOT APPLY TO CROPS UNDERSEEDED WITH LEGUMES.**

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.

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 using aerial application equipment.

## **SPRAY BUFFER ZONES**

Spot treatments using hand-held equipment do not require a spray buffer zone.

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, riparian areas and shrublands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

| Method of application | Crop               | Spray Buffer Zones (metres)<br>Required for the Protection of: |                  |                     |
|-----------------------|--------------------|--|------------------|---------------------|
|                       |                    | Freshwater Habitat of Depths:                                  |                  | Terrestrial Habitat |
|                       |                    | Less than 1 m  | Greater than 1 m |                     |
| Field sprayer         | All labelled crops | 1  | 0                | 3                   |

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 that are larger than 1m can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticide portion of the Canada.ca website.

## FLORASULAM 50 SC HERBICIDE ALONE

### Crops Registered

Spring wheat (including durum) and spring barley

### Application Directions

Apply 100 mL of Florasulam 50 SC Herbicide per hectare in a minimum of 100 L per hectare of water. Add Agral 90 at 0.2% v/v. See weeds species controlled under “Weeds Controlled or Suppressed by Florasulam 50 SC Herbicide Alone at 100 mL/ha.” Apply to actively growing wheat and barley from the 2 to 6 leaf stage. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds.

### Application Timing

Apply to actively growing weeds in the 2-4 leaf stage. Extreme growing conditions such as drought or near freezing temperature prior to, at or following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds which are emerged at the time of application will be affected. If foliage is wet at the time of application control may be decreased. Under conditions of low crop and high weed density, control may be reduced.

### Weeds Controlled or Suppressed by Florasulam 50 SC Herbicide Alone at 100 mL/ha

#### Weeds Controlled:

|                    |                  |
|--------------------|------------------|
| buckwheat, wild    | shepherd's-purse |
| canola, volunteer♦ | smartweed        |
| chickweed, common  | stinkweed        |
| cleavers           | mustard, wild    |

♦ Including herbicide-tolerant canola varieties except Clearfield canola.

#### Weeds Suppressed:

|                  |                         |
|------------------|-------------------------|
| hempnettle       | sowthistle, annual      |
| pigweed, redroot | sowthistle, perennial * |

\* Applications made at advanced leaf stages will reduce product effectiveness.

### Mixing Instructions

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Florasulam 50 SC Herbicide
4. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
5. Add Agral 90 as the last ingredient at the rate of 0.2% v/v (2 L per 1000 L of spray volume).
6. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
7. Follow sprayer clean-up directions.

### Preharvest/Grazing Intervals

Livestock may be grazed on treated crops 7 days following application. Do not harvest the treated crop within 60 days after application.

### TANK-MIX COMBINATIONS – FLORASULAM 50 SC HERBICIDE + AXIAL 100EC HERBICIDE OR LADDER

For control of annual grasses (see table below) tank mix Florasulam 50 SC Herbicide with either Axial 100EC Herbicide or LADDER. Refer to the above table for broadleaved weeds controlled or suppressed with Florasulam 50 SC Herbicide.

#### Tank-Mix Combinations with Florasulam 50 SC Herbicide for Annual Grass Control

| Tank-Mix Partner       | Crops Registered              | Rate/ha | Adjuvant and Rate                             | Additional Weeds Controlled  |
|------------------------|-------------------------------|---------|---|--|
| Axial 100 EC Herbicide | spring wheat<br>spring barley | 600 mL  | Adigor<br>700 mL/ha                           | wild oats, green foxtail♦ yellow foxtail, volunteer oats, volunteer canary seed, proso millet          |
| LADDER                 | spring wheat<br>durum wheat   | 230 mL  | XA Oil<br>Concentrate<br>or Score<br>0.8% v/v | wild oats, green foxtail, yellow foxtail, volunteer (tame) oats, volunteer canary seed, barnyard grass |
|                        |                               |         |   |  |

♦Reduction in control of green foxtail may be observed when tank mixed with Axial 100EC Herbicide.

♦Suppression only of green foxtail when tank mixed with Axial 100EC Herbicide and MCPA Ester.

To control additional broadleaved weeds, MCPA Ester may be added to either tank mix up to a maximum of 420 g ae/ha (equivalent to 840 mL/ha of MCPA LV500). Refer to the MCPA Ester tank mix partner label for rates less than 420 g ae/ha and weed controlled.

### Mixing Instructions

1. Begin to fill sprayer tank with clean water, and engage agitator. **Agitation must be continued throughout the entire mixing and spraying procedure.**
2. When the sprayer is three quarters full of water, add Florasulam 50 SC Herbicide and agitate for 2-3 minutes.
3. If 2,4-D Ester, MCPA Ester or Curtail M are also being added, add these next.
4. Add Axial 100EC Herbicide or LADDER. Agitate for 2-3 minutes.
5. Add required Adjuvant.
6. Agitate for 1-2 minutes before adding remainder of water and then maintain constant agitation.
7. After any break in spraying operations, agitate thoroughly before spraying again.
8. **Use the spray suspension as soon as it is prepared.**
9. If an oil film starts to build up in the tank, drain tank and then clean as directed on this label.

## **TANK MIX COMBINATION - FLORASULAM 50 SC HERBICIDE + MCPA Ester HERBICIDE**

### **Crops Registered**

spring wheat (including durum), spring barley, and oats

### **Application Directions**

For control of a wide spectrum of broadleaved weeds apply Florasulam 50 SC Herbicide at 100 mL/ha tank mixed with MCPA Ester Herbicide at 0.70 L/ha (350 g ai/ha) in 100 L per hectare of water. Apply to actively growing wheat, barley, and oats from the 2 to 6 leaf stage. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds.

### **Weeds Controlled or Suppressed by the Tank Mixture of Florasulam 50 SC Herbicide + MCPA Ester Herbicide**

#### **Weeds Controlled:**

Weeds Controlled:

|                                 |                     |                     |
|---------------------------------|---------------------|---------------------|
| buckwheat, wild                 |                     | ragweed, common     |
| burdock♦♦                       | lamb'squarters      | shepherd's purse    |
| canola, volunteer♦              | mustard, ball       | smartweed           |
| chickweed, common               | mustard, wild       | stinkweed           |
| cleavers                        | pigweed, redroot♦♦♦ | sunflower, annual♦♦ |
| flixweed (spring rosettes only) | pigweed, Russian♦♦  |                     |
| hempnettle♦♦♦                   | prickly lettuce♦♦   |                     |

#### **Weeds Suppressed:**

|   |                       |
|---|-----------------------|
| dandelion (seedlings and overwintered rosettes less than 15 cm) ♦♦♦ | sowthistle, perennial |
| plantain (top growth)   | stork's bill♦♦♦       |
| sowthistle, annual  | thistle, Canada♦♦♦    |

♦Including herbicide-tolerant canola varieties

♦♦Up to 4 leaf stage

♦♦♦Optimum control can be achieved with the addition of 70 g ae/ha) of MCPA Ester Herbicide

#### **Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Florasulam 50 SC Herbicide
4. Add the correct amount of MCPA Ester Herbicide and continue to agitate.
5. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
6. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
7. Follow sprayer clean-up directions.

**Note: Do not add a surfactant to this tank mixture.**

#### **Pre-Harvest/Grazing Intervals (Florasulam 50 SC Herbicide + MCPA Ester Herbicide)**

1. Do not cut the treated crop for hay or graze treated crop within 7 days after application.
2. Do not harvest the treated crop within 60 days after application.

## **TANK-MIX COMBINATIONS - FLORASULAM 50 SC HERBICIDE + MCPA Ester HERBICIDE + OTHER HERBICIDES**

### **Crops Registered**

spring wheat (including durum) and spring barley

**Do not apply these tank mixes to oats.**

### **Application Directions**

Tank mixtures of Florasulam 50 SC Herbicide + MCPA Ester Herbicide with other herbicides will provide control of broadleaved weeds and specified annual grasses. Apply to actively growing wheat and barley from the 2 to 6 leaf stage. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Follow all precautions, minimum interval to harvest and directions for use on the Florasulam 50 SC Herbicide.

### **Tank-Mix Combinations with Florasulam 50 SC Herbicide + MCPA Ester Herbicide + Other Herbicides**

| <b>Herbicide Tank-Mix Partner</b> | <b>Crops Registered</b>               | <b>Rate (Product/ha)</b> | <b>Adjuvant and Rate</b>               | <b>Additional Weeds Controlled</b>   |
|-----------------------------------|---------------------------------------|--------------------------|--|--|
| <b>Assert 300 SC Herbicide</b>    | wheat (spring & durum), spring barley | 1.6 L                    | Refer to Assert 300 SC Herbicide label | wild oat   |
| LADDER                            | wheat (spring & durum)                | 230 mL                   | XA Oil Concentrate 0.8% v/v            | wild oats, green foxtail, yellow foxtail, volunteer (tame) oats, volunteer canary seed, barnyard grass |
| <b>Everest Solupak 70 DF♦</b>     | Wheat (spring & durum)                | 43 g                     | Ag-Surf or Agral 90 0.25% v/v          | Wild oat and green foxtail   |

♦Wheat (including durum) exposed to water-logged or saturated soils, or temperature extremes such as heat or freezing weather, or drought, low fertility or plant disease at application time could show unacceptable injury symptoms. Weed control may also be reduced by these same conditions.

## Mixing Instructions

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add Florasulam 50 SC Herbicide (see Notes 2 and 3 below).
4. Add MCPA Ester Herbicide and continue to agitate.
5. Add the required amount of tank mix partner and continue to agitate.
6. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
7. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
8. Follow sprayer clean-up directions.

**Note 1:** Add only the adjuvant recommended above. Follow tank-mix partner label for order of mixing and any specific instructions for mixing.

**Note 2:** When using Assert 300 SC Herbicide, add tank mix partners in the following order: Florasulam 50 SC Herbicide, Spray Water pH Adjuster, Assert 300 SC Herbicide, MCPA Ester Herbicide.

**Note 3:** When using Everest Solupak 70 DF Herbicide add tank mix partners in the following order: Everest Solupak 70 DF Herbicide, tank mix partner, adjuvant.

## TANK MIX COMBINATION - FLORASULAM 50 SC HERBICIDE+ CURTAIL M HERBICIDE

### Crops Registered

spring wheat (including durum), spring barley, and oats

### Application Directions

For control of a wide spectrum of annual broadleaved weeds plus Canada thistle and perennial sowthistle, apply Florasulam 50 SC Herbicide at 100 mL/ha tank mixed with 1.5 L/ha of Curtail M Herbicide in 100 L per hectare of water. Apply to actively growing wheat, barley, and oats from the 2 to 6 leaf stage. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds.

### Weeds Controlled or Suppressed by the Tank Mixture of Florasulam 50 SC Herbicide + Curtail M Herbicide

#### Weeds Controlled:

|  |                  |  |
|--|------------------|--|
| buckwheat, wild  | lamb'squarters   | stinkweed                                  |
| canola, volunteer♦                                       | mustard, wild    | stork's-bill                               |
| chickweed, common  | pigweed, redroot | thistle, Canada                            |
| cleavers   |                  | shepherd's purse                           |
| dandelions (seedlings and overwintered rosettes < 15 cm) |                  | smartweed                                  |
| Flixweed (spring rosettes only)♦♦                        |                  | hempnettle                                 |
| sowthistle, annual                                       |                  | sowthistle, perennial (top growth only) ♦♦ |

♦Including herbicide-tolerant canola varieties.

♦♦Control not observed until a minimum of 40 days after treatment.

**Weeds Suppressed:**

dandelion (overwintered rosettes > 15 cm, mature plants)  
 plantain (top growth)

**Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Florasulam 50 SC Herbicide
4. Add the correct amount of Curtail M Herbicide and continue to agitate.
5. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
6. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
7. Follow sprayer clean-up directions. **Note: Do not add a surfactant to this tank mixture.**

**Pre-Harvest/Grazing Intervals (Florasulam 50 SC Herbicide + Curtail M Herbicide)**

1. Do not cut the treated crop for hay or graze treated crop within 7 days after application.
2. Do not harvest the treated crop within 60 days after application.

**TANK-MIX COMBINATIONS - FLORASULAM 50 SC HERBICIDE + CURTAIL M HERBICIDE + OTHER HERBICIDES****Crops Registered**

spring wheat (including durum) and spring barley

**Do not apply these tank mixes to oats.**

**Application Directions**

Tank mixtures of Florasulam 50 SC Herbicide + Curtail M Herbicide with other herbicides will provide control of broadleaved weeds and specified annual grasses. Apply to actively growing wheat and barley from the 2 to 6 leaf stage. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Follow all precautions, minimum interval to harvest and directions for use on the Florasulam 50 SC Herbicide.

**Tank-Mix Combinations with Florasulam 50 SC Herbicide, Curtail M Herbicide + Other Herbicides**

| <b>Tank-Mix Partner</b>        | <b>Crops Registered</b>                  | <b>Rate/ha</b> | <b>Adjuvant and Rate</b>              | <b>Additional Weeds Controlled</b> |
|--------------------------------|--|----------------|---------------------------------------|------------------------------------|
| <b>Assert 300 SC Herbicide</b> | wheat (spring & durum),<br>spring barley | 1.6<br>Litres  | Refer to<br>Assert<br>300 SC<br>label | wild oat                           |
| <b>Everest Solupak 70 DF♦</b>  | Wheat (spring & durum)                   | 46 g           | Ag-Surf or<br>Agral 90<br>0.25% v/v   | Wild oat and green<br>foxtail      |

◆Wheat (including durum) exposed to water-logged or saturated soils, or temperature extremes such as heat or freezing weather, or drought, low fertility or plant disease at application time could show unacceptable injury symptoms. Weed control may also be reduced by these same conditions.

### **Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add tank mix partners in the proper order (see Notes 2 and 3 below) and continue to agitate.
4. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
5. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
6. Follow sprayer clean-up directions.

**Note 1:** Add only the adjuvant recommended. Follow tank-mix partner label for order of mixing and for any specific mixing instructions.

**Note 2:** When using Assert 300 SC Herbicide, add tank mix partners in the following order: Florasulam 50 SC Herbicide, Spray Water pH Adjuster, Assert 300 SC Herbicide, Curtail M Herbicide.

**Note 3:** When using Everest Solupak 70 DF Herbicide add tank mix partners in the following order: Everest Solupak 70 DF Herbicide, tank mix partner, adjuvant. Vigor's agitation is required to dissolve Everest Solupak 70 DF Herbicide before adding other tank mix partners.

### **TANK-MIX COMBINATION - FLORASULAM 50 SC HERBICIDE + 2,4-D Ester HERBICIDE**

#### **Crops Registered**

Spring wheat (including durum)

#### **Application Directions**

For control of a wide spectrum of broadleaved weeds apply Florasulam 50 SC Herbicide at 100 mL/ha tank-mixed with 2,4-D Ester Herbicide at 560 g a.e./ha. Apply when wheat is in the 3 leaf expanded stage to the 6 leaf stage. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be affected. Best results are obtained from application made to seedling weeds.

#### **Weeds Controlled or Suppressed by the Tank Mixture of Florasulam 50 SC Herbicide + 2,4-D Ester Herbicide**

##### **Weeds Controlled:**

|                    |                  |                    |
|--------------------|------------------|--------------------|
| bluebur            | flixweed         | ragweed, common    |
| burdock            | kochia◆◆         | shepherd's purse   |
| buckwheat, tartary | lady's-thumb     | smartweed          |
| buckwheat, wild    | lamb'squarters   | sowthistle, annual |
| canola, volunteer◆ | mustard, ball    | stinkweed          |
| chickweed, common  | mustard, wild    | sunflower, annual  |
| cleavers           | pigweed, redroot | thistle, Russian   |
| cocklebur          | plantain         | vetch              |



dandelion (seedlings and overwintered rosettes)  
prickly lettuce                      wild radish

◆Including all herbicide-tolerant canola varieties.

◆◆Up to 5 cm in height

**Weeds Suppressed:**

Hempnettle,  
sowthistle, perennial (top growth control),  
thistle, Canada (top growth control)

**Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add Florasulam 50 SC Herbicide
4. Add 2,4-D Ester Herbicide and continue to agitate.
5. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
6. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
7. Follow sprayer clean-up directions.

**Pre-Harvest/Grazing Intervals (Florasulam 50 SC Herbicide + 2,4-D Ester Herbicide)**

1. Do not permit lactating dairy animals to graze fields within 7 days after application.
2. Do not harvest forage or cut hay within 30 days after application.
3. Withdraw meat animals from treated fields at least 3 days before slaughter.
4. Do not harvest the treated mature crop within 60 days after application.

**TANK-MIX COMBINATIONS WITH FLORASULAM 50 SC HERBICIDE + 2,4-D Ester HERBICIDE + OTHER HERBICIDES**

**Crops Registered**

spring wheat (including durum)

Tank mixtures of Florasulam 50 SC Herbicide + 2,4-D Ester Herbicide with other herbicides will provide control of broadleaved weeds and specified annual grasses. Apply when crops and weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Follow all precautions, minimum interval to harvest and directions for use on the Florasulam 50 SC Herbicide.

## Tank-Mix Combinations with Florasulam 50 SC Herbicide + 2,4-D Ester Herbicide + Other Herbicides

| Herbicide Tank-Mix Partner | Rate/ha    | Adjuvant and Rate             | Additional Weeds Controlled |
|----------------------------|------------|-------------------------------|-----------------------------|
| Assert 300 SC Herbicide    | 1.6 Litres | Refer to Assert 300 SC label  | wild oat                    |
| Everest Solupak 70 DF♦     | 43 g       | Ag-Surf or Agral 90 0.25% v/v | Wild oat and green foxtail  |

♦Wheat (including durum) exposed to water-logged or saturated soils, or temperature extremes such as heat or freezing weather, or drought, low fertility or plant disease at application time could show unacceptable injury symptoms. Weed control may also be reduced by these same conditions.

### Mixing Instructions

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add Florasulam 50 SC Herbicide (see Notes 2 and 3 below).
4. Add 2,4-D Ester 0 Herbicide and continue to agitate.
5. Add tank mix partner and continue to agitate.
6. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
7. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
8. Follow sprayer clean-up directions.

**Note 1:** Add only the adjuvant recommended below. Follow tank-mix partner label for order of mixing and any specific instructions for mixing.

**Note 2:** When using Assert 300 SC herbicide, add tank mix partners in the following order: Florasulam 50 SC Herbicide, Spray Water pH Adjuster, Assert 300 SC Herbicide, 2,4-D LV 600 Herbicide.

**Note 3:** When using Everest Solupak 70 DF add tank mix partners in the following order: Everest Solupak 70 DF, tank mix partner, adjuvant. Vigouress agitation is required to dissolve Everest Solupak 70 DF before adding other tank mix partners.

## TANK MIX COMBINATION - FLORASULAM 50 SC HERBICIDE + BROMOXYNIL

### Crops Registered

spring wheat (including durum) and spring barley

### Application Directions

For control of a wide spectrum of broadleaved weeds, apply Florasulam 50 SC Herbicide at 80-100 mL/ha tank mixed with 230- 280 g ai/ha of bromoxynil liquid formulations, including emulsifiable suspensions (for example, 0.96 -1.2 L Bromotril 240 EC, 0.8 -1 L/ha Pardner Herbicide or 0.96 -1.2 L/ha Koril 235 Liquid Herbicide,), in 100 L per hectare of water. Apply to spring wheat, durum wheat, and spring barley from the 2 to 6 leaf stage. Apply when weeds

are actively growing (2-4 leaf stage). Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Use the lower rate when the weeds infestations are low and the higher rate when the weeds infestations are heavy.

### **Weeds Controlled or Suppressed by Florasulam 50 SC Herbicide + bromoxynil**

Weeds Controlled: Up to 4 leaf stage

|                    |                      |                    |
|--------------------|----------------------|--------------------|
| bluebur            | kochia◆◆◆            | smartweed, green   |
| buckwheat, wild    | lady's-thumb         | smartweed, pale    |
| canola, volunteer◆ | mustard, wild        | stinkweed          |
| chickweed, common  | nightshade, American | thistle, Russian◆◆ |
| cleavers           | pigweed, red-root    | velvetleaf◆◆◆      |
| cocklebur          | ragweed, common      |                    |
| cow cockle         |                      | shepherd's purse   |

◆Including herbicide-tolerant canola varieties except Clearfield canola.

◆◆Apply before plants are 5 cm high

◆◆◆Apply before plants are 8 cm high

Up to 8 leaf stage

|                    |                   |
|--------------------|-------------------|
| buckwheat, common  | groundsel, common |
| buckwheat, Tartary | lamb's-quarters   |

### **Weeds Suppressed:**

|                    |                        |
|--------------------|------------------------|
| hempnettle         | sowthistle, perennial◆ |
| sowthistle, annual |                        |

◆Applications made at advanced leaf stages will reduce product effectiveness.

### **Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Florasulam 50 SC Herbicide and continue to agitate.
4. Add the correct amount of bromoxynil product
5. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
6. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
7. Follow sprayer clean-up directions.

**Note: Do not add a surfactant to this tank mixture.**

### **Pre-Harvest/Grazing Intervals (Florasulam 50 SC Herbicide + bromoxynil)**

1. Do not cut the treated crop for hay or graze treated crop within 30 days of application.
2. Do not harvest the treated crop within 60 days of application.

## TANK-MIX COMBINATIONS WITH FLORASULAM 50 SC HERBICIDE + BROMOXYNIL + OTHER HERBICIDES

### Crops Registered

spring wheat (including durum)

Tank mixtures of Florasulam 50 SC Herbicide + bromoxynil with other herbicides will provide control of broadleaved weeds and specified annual grasses. Apply when crops and weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from applications made to seedling weeds. Follow all precautions, minimum interval to harvest and directions for use on the Florasulam 50 SC Herbicide.

### Tank-Mix Combinations with Florasulam 50 SC Herbicide + Bromoxynil Liquid Formulations, Including Emulsifiable Suspensions, + Other Herbicides

| Tank-Mix Partner | Crops Registered       | Rate/ha | Adjuvant and Rate           | Additional Weeds Controlled |
|------------------|------------------------|---------|-----------------------------|-----------------------------|
| LADDER           | wheat (spring & durum) | 230 mL  | XA Oil Concentrate 0.8% v/v | wild oat and green foxtail  |

### Mixing Instructions

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add Florasulam 50 SC Herbicide
4. Add bromoxynil product and continue to agitate.
5. Add tank mix partner and continue to agitate.
6. Add adjuvant if required and continue to agitate.
7. Fill sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.
8. Follow sprayer directions and precautions as outlined above, especially when applying next to sensitive crops (e.g. canola and legumes).
9. Follow sprayer clean-up directions.

## TANK MIX COMBINATION - FLORASULAM 50 SC HERBICIDE + GLYPHOSATE PRESENT AS ISOPROPYLAMINE SALT OR DIMETHYLAMINE SALT

**Crops Registered:** Spring barley Oats Spring wheat (including durum)

### Application Directions

Florasulam 50 SC Herbicide may be tank mixed with glyphosate present as isopropylamine salt or dimethylamine salt to control volunteer glyphosate-tolerant canola, wild buckwheat (up to 5 leaf) and top growth control of dandelion (up to 6 leaf stage), in addition to the labelled weeds controlled by Florasulam 50 SC Herbicide or glyphosate.

Apply Florasulam 50 SC Herbicide at 100 mL/ha with glyphosate (present as isopropylamine salt or dimethylamine salt) at 450 g a.e./ha in 100 L water per hectare.

### **Application Timing and Cropping**

Apply to actively growing weeds in the 2-4 leaf stage, except where noted above. Extreme growing conditions such as drought or near freezing temperature prior to, at or following time of application may reduce weed control. Only weeds which are emerged at the time of application will be affected. If foliage is wet at the time of application, control may be decreased. Under conditions of high weed density, control, may be reduced.

### **Spring**

Florasulam 50 SC Herbicide + glyphosate may be applied in the spring prior to seeding and no longer than 48 hours after seeding prior to any crop emergence. Fields treated with Florasulam 50 SC Herbicide in the spring may be planted to barley, oats, wheat, durum or summer fallowed.

### **Summer**

Prior to August 1st: Florasulam 50 SC Herbicide + glyphosate may be applied to summer fallow fields and seeded in the following spring to barley, canola, oats, peas or wheat (including durum) or summer fallowed.

After August 1st, Florasulam 50 SC Herbicide + glyphosate may be applied to summer fallow fields and seeded in the following spring to barley, oats or wheat (including durum) or summer fallowed.

### **Fall**

Florasulam 50 SC Herbicide + glyphosate may be applied to stubble or summer fallow fields after August 1st and prior to freeze-up and may be seeded to barley, oats or wheat (including durum) or summer fallowed.

**Do not use in successive years at the same site.**

Apply only one of the following treatments to the same site in the same year: a tank-mix of Florasulam 50 SC Herbicide and a glyphosate product (prior to planting or as the initial treatment in summerfallow), or Spectrum Herbicide Tank-Mix (postemergence).

### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, Florasulam 50 SC Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Florasulam 50 SC 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 Florasulam 50 SC 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 ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262.

**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 any way that is inconsistent with the directions on the label.

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