

(Container)



## Frontline™ I Herbicide

GROUP	2	HERBICIDE
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**FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND PEACE RIVER REGION OF BRITISH COLUMBIA ONLY**

Frontline I Herbicide is a selective herbicide for postemergent control of annual broadleaved weeds including cleavers, wild buckwheat and chickweed in spring wheat (including durum), spring barley and oats (tank mixes only).

AGRICULTURAL

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

GUARANTEE: florasulam 50 g/L  
Contains 1,2-benzisothiazoline-3-one at 0.02% as a preservative  
Suspension concentrate

REGISTRATION NO. 29874 PEST CONTROL PRODUCTS ACT

**CAUTION**  **POISON**

**MAY CAUSE SLIGHT EYE IRRITATION**

NET CONTENTS: 0.8L

**Dow AgroSciences Canada Inc.**

2400, 215 – 2<sup>nd</sup> Street S.W.

Calgary, Alberta

T2P 1M4

1-800-667-3852

™Trademark of Dow AgroSciences LLC

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

**At all times:** Wear clean clothing with full length sleeves and pants.

**During mixing and loading, and clean-up and repair:** Wear chemical-resistant gloves. Rinse gloves before removal. Use safety glasses.

**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.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at [www.croplife.ca](http://www.croplife.ca).

**FIRST AID**

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

**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.

**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 HAZARDS**

Overspray or drift to sensitive habitats should be avoided. A buffer zone of 30 metres is required between the downwind edge of the boom and the closest edge of sensitive terrestrial habitats including forested areas, shelter belts, woodlots, hedgerows, and shrublands. A buffer zone of 5 metres is required between the downwind edge of the boom and the closest edge of sensitive aquatic habitats including sloughs, ponds, prairie potholes, lakes, rivers, streams, wetlands and wildlife habitats at the edge of these bodies of water. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.

Do not apply during periods of dead calm or when winds are gusty.

**STORAGE**

Store in original containers in a secure, dry heated storage. Frontline I 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.

## **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.

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

### **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. The user assumes the risk to persons or property that arises from any such use of this product.

(Booklet)



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## **GENERAL INFORMATION**

Frontline I 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. Frontline I Herbicide is mixed with water and applied as a uniform broadcast spray. It is non-corrosive, nonflammable, and nonvolatile.

Frontline I 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 Frontline I 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.

Frontline I 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**

Frontline I 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. Frontline I Herbicide is a Group 2 mode of action herbicide.

## **GENERAL USE PRECAUTIONS**

### **Sensitive Plants**

Do not apply Frontline I 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 Hazards section of the label.

**Crop Rotation**

Fields previously treated with Frontline I 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.

**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 Frontline I 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 UNDERSEEDING WITH LEGUMES.**

**TANK MIX COMBINATION - FRONTLINE I HERBICIDE + MCPA LV 500 HERBICIDE****Crops Registered**

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

**Application Directions**

For control of a wide spectrum of broadleaved weeds apply Frontline I Herbicide at 100 mL/ha tank mixed with MCPA LV 500 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. Follow all precautions, directions for use, and limitations on the tank mix partner labels.

**Weeds Controlled or Suppressed by the Tank Mixture of Frontline I Herbicide + MCPA LV 500 Herbicide**Weeds Controlled:

buckwheat, wild	kochia**	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 140 mL (70 g ai/ha) of MCPA LV 500 Herbicide

**Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add the required amount of Frontline I Herbicide
4. Add the correct amount of MCPA LV 500 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 (Frontline I Herbicide + MCPA LV 500 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 - FRONTLINE I HERBICIDE + MCPA LV 500 HERBICIDE + OTHER HERBICIDES**

**Crops Registered**

spring wheat (including durum) and spring barley

**Do not apply this tank mix to oats.**

**Application Directions**

Tank mixtures of Frontline I Herbicide + MCPA LV 500 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 Frontline I Herbicide and tank mix partner label.

**Tank-Mix Combinations with Frontline I Herbicide + MCPA LV 500 Herbicide + Other Herbicides**

Herbicide Tank-Mix Partner	Crops Registered	Rate (Product/ha)	Adjuvant and Rate	Additional Weeds Controlled
Assert <sup>1</sup> 300 SC Herbicide	wheat (spring & durum), spring barley	1.6 L	Refer to Assert 300 SC Herbicide label	wild oat

**Mixing Instructions**

1. Fill sprayer tank 1/2 full of water.
2. Start sprayer tank agitation.
3. Add Frontline I Herbicide (see Notes 2 and 3 below).
4. Add MCPA LV 500 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:** When using Assert 300 SC Herbicide, add tank mix partners in the following order: Frontline I Herbicide, Spray Water pH Adjuster, Assert 300 SC Herbicide, MCPA LV 500 Herbicide.

**RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, Frontline I Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Frontline I 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 Frontline I Herbicide or other Group 2 herbicides 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.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop 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 Dow AgroSciences Canada Inc. at 1-800-667-3852.

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<sup>1</sup>Assert is a trademark of BASF Canada

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