(Container)

GROUP	2	4	HERBICIDES
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# **STEEL Herbicide**

**Emulsifiable Concentrate** 

For the control of annual broadleaved weeds in spring wheat, durum wheat, spring barley and oats

### FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA ONLY

**AGRICULTURAL** 

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

**ACTIVE INGREDIENTS:** 

florasulam 2.5 g/L fluroxypyr 100 g/L (present as 1-methylheptyl ester)

Contains 1,2-benzisothiazolin-3-one at 0.00965% as a preservative

Or

Contains 2-methyl-4-isothiazolin-3-one at 0.000185% and 5-chloro-2-methyl-4-isothiazolin-3-one at 0.000565% as preservatives

Warning, contains the allergen soy

REGISTRATION NUMBER 33936 PEST CONTROL PRODUCTS ACT

# WARNING EYE AND SKIN IRRITANT POTENTIAL SKIN SENSITIZER

NET CONTENTS: 1 L -Bulk

**SHARDA Cropchem Limited** 

2nd Floor, Prime Business Park Dashrathlal Joshi Road Vile Parle (West) Mumbai - 400056, India Canadian Agent:
SHARDA Cropchem Limited
63 Kingsview Blvd
Etobicoke, Ontario, CA
M9R1V1
1-844-810-5720
1-416-840-5639

# PRECAUTIONS KEEP OUT OF REACH OF CHILDREN

**Harmful if swallowed. Causes eye and skin irritation.** Do not get in eyes, on skin or on clothing. Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, protective eyewear (goggles or face shield), socks and shoes during mixing, loading, application, clean-up and repair. Wash contaminated clothing before reuse. Destroy contaminated shoes and leather articles.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

#### PHYSICAL OR CHEMICAL HAZARDS

**COMBUSTIBLE.** Do not use or store near heat or open flame.

#### **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 the judgment of the physician in response to reactions of the patient. **DO NOT INDUCE VOMITING.** Vomiting may cause aspiration pneumonia. If burn is present, treat as any thermal burn after decontamination. If swallowed, aspiration may cause chemical pneumonia. When considering emptying the stomach, the danger of chemical pneumonia must be weighed against toxicity. If lavage is performed, a cuffed endotrachael tube should be considered

## **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 buffer zones specified under DIRECTIONS FOR USE.

Overspray or drift to sensitive habitats should be avoided.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

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 ground water contamination.

#### STORAGE

Store in original containers in a secure, dry heated storage. If product is frozen, bring to room temperature and agitate before use. Do not allow contamination of seeds, plants, fertilizers or other pesticides. To prevent contamination, store this product away from food or feed. 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.
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For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

(Booklet)

GROUP 2 4 HERBICIDES

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#### **GENERAL INFORMATION**

Steel Herbicide is a selective postemergence herbicide for the control of hard-to-kill annual broadleaved weeds in spring wheat (including durum), spring barley and oats. Steel Herbicide is mixed with water and applied as a uniform broadcast spray.

Steel 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 Steel 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.

Steel 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

Steel Herbicide contains a Group 2 and a 4 mode of action herbicide. The Group 2 mode of action herbicide inhibits the production of the ALS enzyme in plants. This enzyme is essential for the production of certain amino acids required for plant growth. The Group 4 mode of action herbicide disrupts normal plant growth regulation resulting in death of susceptible plants.

### **GENERAL USE PRECAUTIONS**

#### Sensitive Plants

Do not apply Steel 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 or other desirable plants is likely to result in exposure to spray or spray drift.

### **Crop Rotation**

Fields previously treated with Steel Herbicide can be seeded the following year to barley, canola, corn, dry common beans (*Phaseolus vulgaris*), flax, lentils, mustard (brown, oriental and/or yellow) oats, peas, potatoes (except seed potatoes), soybeans, sunflower or wheat or fields can be summerfallowed.

Do not use in successive years at the same site.

#### Tank Mixtures

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Sharda Cropchem Limited.

## **Spray Equipment Precaution**

Do not apply through any type of irrigation system.

# 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.

## Sprayer clean-out

To avoid injury to desirable plants, thoroughly clean equipment used to apply this product before re-use or using it to apply other chemicals.

- 1. Immediately after spraying, completely drain the sprayer tank. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
- 2. First rinse:
  - Spray the inside of tank with clean water and fill the sprayer with at least one tenth of the spray tank volume.
  - Agitate and circulate for 15 minutes, and flush through booms and hoses.
  - Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
  - Drain tank completely.

#### Second rinse:

- Fill the tank with clean water.
- Add All Clear Spray Tank Decontaminator, or Clean-Out Spray Tank Cleaner, or 1 L of household ammonia (containing a minimum of 3 % ammonia) per 100 L of water, or similar tank cleaning agent as per manufacturer's recommendations while filling the tank with clean water
- Agitate and then flush the boom and hoses with the cleaning solution. Top up with water making sure the tank is completely full. Allow to stand for 15 minutes with agitation. Flush the

solution out of the spray tank through the spray booms. Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.

- If possible, let the solution stand in the sprayer tank and booms for an extended period of time, overnight if possible.
- After flushing the boom and hoses, drain tank completely.
- Remove nozzles and screens and clean separately with a cleaning agent or an ammonia solution (100 mL in 10 L water).

#### 4. Third rinse:

- Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume.
- Remove end caps or open ball valves on the ends of each boom section, and flush solution through the boom ends to ensure there is no spray solution trapped between the boom end and the nozzles.
- Drain tank completely.

**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.

Do not enter or allow worker re-entry into treated areas until 12 hours after application.

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.

DO NOT apply using aerial application equipment.

<u>Field sprayer application</u>: **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.

## Crops

Spring wheat, durum wheat, spring barley and oats.

### **Application Rate**

For control of a wide spectrum of broadleaved weeds, apply a uniform spray containing 1.0 L/ha of Steel Herbicide in a minimum of 100 L of water per hectare to thoroughly cover the weeds. Apply to actively growing wheat, barley, and oats from the 2 leaf expanded 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.

### **Mixing Instructions**

- 1. Fill sprayer tank 1/2 full of water
- 2. Start sprayer tank agitation
- 3. Add the required amount of Steel Herbicide
- 4. Complete filling 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: Do not add a surfactant to this product unless instructed to do so (see tank mix combinations – Table 3).

# Table 1: Weeds Controlled by Steel Herbicide at 1.0 L/ha

cleavers volunteer flax common chickweed wild buckwheat

kochia\*

# **Pre-Harvest/Grazing Intervals**

- 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 WITH STEEL HERBICIDE

## **Crops Registered**

Spring wheat, durum wheat and spring barley (see Table 3 for exclusions)

Tank mixtures of Steel Herbicide with other herbicides will provide control of additional 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 Steel Herbicide and tank-mix partner labels.

### **Mixing Instructions**

- 1. Fill sprayer tank 1/2 full of water.
- 2. Start sprayer tank agitation.
- 3. Add the required amount of Steel Herbicide and continue to agitate.
- 4. Add the required amount of tank-mix partner.
- 5. Fill the sprayer tank with sufficient water to spray 100 L of spray mixture per hectare.

Note: Add only the adjuvant recommended below. Follow tank-mix partner label for order of mixing.

Table 2: Steel Herbicide Tank Mix Combinations for Broadleaf Weed Control

Herbicide Tank Mix Partner	Crops Registered	Rate (Product/ha)	Additional Weeds Controlled or Suppressed (S) Include
MCPA Ester <sup>†</sup>	spring wheat, durum wheat & spring barley	580-700 mL/ha MCPA 600 (350-420 g ae/ha)	flixweed, hempnettle, lamb's-quarters, ragweed, redroot pigweed, shepherd's-purse, smartweed, stork's-bill (S), sunflower (annual), volunteer canola, wild mustard

<sup>&</sup>lt;sup>†</sup> Use higher rates for weeds in the bud stage, dry or cold weather or heavy infestations

including ALS resistant biotypes

Herbicide Tank	Crops	Rate	Adjuvant	Additional Weeds
Mix Partner	Registered	Product/ha	and Rate	Controlled or
				Suppressed(S)
Assert 300 SC Herbicide	spring wheat, durum wheat & spring barley	1.6 L	Refer to the Assert 300 SC Herbicide label	wild oats
Axial 100 EC Herbicide <sup>†</sup>	spring wheat & spring barley	600 mL/ha	Adigor 700 mL/ha	wild oats, green foxtail, yellow foxtail, barnyard grass
Everest 2.0 Herbicide **††	spring wheat & durum wheat	36 – 72 mL/ha	Non-ionic surfactant (see label) 0.25% v/v	wild oats & green foxtail

Table 3: Steel Herbicide Broadleaf Tank Mix Combinations plus Other Herbicides for Annual Grass Control

#### **Buffer Zones**

Spot treatments using hand-held equipment **DO NOT** require a buffer zone.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of application	Buffer Zones (metres) Required for the Protection of:	
	Aquatic Habitat	Terrestrial Habitat
Field sprayer	15	30

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

## RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Steel Herbicide is a Group 2 and Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Steel Herbicide and other Group 2 and Group 4 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 Steel Herbicide or other Group 2 herbicide 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

<sup>&</sup>lt;sup>††</sup> For conditions for when to use the higher rates, refer to the Everest 2.0 Herbicide label.

<sup>&</sup>lt;sup>♦</sup> Do not apply Axial 100 EC Herbicide in tank mixes containing 2,4-D.

<sup>\*\*</sup>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.

- 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, Sharda Cropchem Limited at 1-844-810-5720.

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All products listed are registered trademarks of their respective companies.