GROUP 4 6 HERBICIDES

**THRASHER®** 

Emulsifiable Selective Herbicide

Contains Bromoxynil and 2,4-D

For use in SPRING WHEAT, DURUM WHEAT AND BARLEY

COMMERCIAL (AGRICULTURAL)

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



EYE AND SKIN IRRITANT POTENTIAL SKIN SENSITIZER

REGISTRATION NO. 28779 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENTS: Bromoxynil present as octanoate ester 225g/L

2,4-D present as 2-ethylhexyl ester 225 g/L

WARNING, CONTAINS THE ALLERGEN SOY

NET CONTENTS: [4-1050 LITRES, BULK]

For emergency medical help and health/safety inquires call ProPharma 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:

HARMFUL OR FATAL IF SWALLOWED.

KEEP OUT OF REACH OF CHILDREN.

DO NOT get in eyes. DO NOT get on skin. Causes eye and skin irritations. Wash concentrate from skin or eyes immediately.

Avoid working in spray mist. After use wash hands and other exposed skin.

Do not use in residential areas, which are defined as sites where bystanders may be present during or after spraying, including homes, schools, parks, playgrounds, playing fields and public buildings.

PROTECTIVE CLOTHING AND EQUIPMENT: mixing and loading: All handlers must wear protective eye wear (face shield or safety glasses). When handling more than 265 kg a.e. of 2,4-D (1177 L of THRASHER®) per day, workers must also use a closed system. DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

Only handlers wearing personal protective equipment may be in the area being treated during application.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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 inversions, application equipment, and sprayer settings.

**Ground applications:** Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair. Wear a long-sleeved shirt and long pants, chemical resistant gloves, and socks plus shoes during applications. Gloves are not required during application within a closed cab.

**Aerial applications: the field crew and the mixer/loaders:** Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair.

**Aerial applicators**: Wear a long-sleeved shirt, long pants, socks and shoes during application. Gloves are not required during application within a closed cockpit. Do not allow the pilot to mix chemicals to be loaded onto the aircraft.

### **ENVIRONMENTAL PRECAUTIONS:**

This product contains aromatic petroleum distillates, which are toxic to aquatic organisms. TOXIC to small wild mammals, birds, aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE. Avoid contamination of ponds, streams, rivers and other water sources. Avoid spray drift onto crops other than those recommended.

This product will harm other broadleaved plants in the vicinity of the treatment area. Do not spray exposed roots of trees and ornamentals.

**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.

**Surface runoff:** 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.

Do not irrigate within 24 hours after application.

### **OPERATOR USE PRECAUTIONS:**

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
- Wash hands before eating, drinking, using tobacco or using the toilet.
- If herbicide penetrates clothing remove immediately; then wash thoroughly and put on clean clothing. Throw away clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- After using this product, remove clothing and launder separately and promptly and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's instructions for cleaning personal protective clothing and equipment. If no such instructions for washables are provided, use detergent and hot water. Keep and wash personal protective equipment separate from household laundry.
- After work, remove all clothing and shower using soap and water.

**TRANSFER SYSTEM:** For containers larger than 20 L: Use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

## **FIRST AID:**

<u>IF SWALLOWED:</u> Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor.

Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person. <u>IF ON SKIN/CLOTHING:</u> 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.

<u>IF IN EYES:</u> 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.

<u>IF INHALED:</u> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. 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:** This product contains an aromatic hydrocarbon solvent. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. This product may cause mild irritation to the eyes. Overexposure to 2,4-D may cause coughing, burning, dizziness or temporary loss of muscle coordination. Other possible effects of overexposure include fatigue, muscle weakness or nausea. Treat symptomatically.

**STORAGE CONDITIONS:** Store this product away from food or feed. Store the container tightly closed away from seeds, fertilizer and plants. This THRASHER® formulation will solidify at temperatures below -20°C, but will become usable at temperatures above 0°C. *Shake well before using*.

Insecticides and fungicides should be separated from herbicides so as to prevent the possibility of cross contamination.

## **DISPOSAL**

### FOR 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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## FOR REFILLABLE CONTAINERS:

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## **DISPOSAL OF UNUSED, UNWANTED PRODUCT:**

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 cleanup 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 offense under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

THRASHER is a registered trademark of an ADAMA Group Company. All other trademarks are the property of their respective owners.

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**Ground applications:** Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, clean-up and repair. Wear a long-sleeved shirt and long pants, chemical resistant gloves, and socks plus shoes during applications. Gloves are not required during application within a closed cab.

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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 cleanup 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.

#### **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.

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) coarse classification. Boom height must be 60 cm or less above the crop or ground.

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

## **USE PRECAUTIONS:**

Avoid spray drift to any desirable vegetation NOT listed on this label as damage may occur. Avoid contamination of ponds, streams, rivers, lakes and other water sources. Do not spray during periods of high winds when spray is likely to drift. Coarse sprays are less likely to drift. Do not spray during periods of high temperatures when crops may be under stress as damage to the crop may occur.

### **TIMING:**

For best results spray when weeds are in the seedling stage. Apply in good growing conditions. Application *must* be made before the crop shields the weeds.

#### SPRAYER:

Wash the tank and clean all filters, screens and tips. Select nozzle tips to apply the recommended volume per hectare. Flood jet type tips are not recommended. Adjust boom height to ensure uniform coverage of the weeds. For ground applications, spray at 5 to 10 kph. Ensure that all tips are in good condition and spraying the same volume.

#### **MIXING:**

Half fill the tank with clean water. Add the required amount of THRASHER® and agitate thoroughly. Fill the tank and agitate again before use.

### **AERIAL APPLICATION:**

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rate and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label

before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

## **Use Precautions:**

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

## **Operator Precautions:**

Wear a long-sleeved shirt, long pants, socks and shoes during application. Gloves are not required during application within a closed cockpit. Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. Aerial applicators must wear coveralls over long pants and a long-sleeved shirt. Aircraft must be closed cab. Mixer/loader and applicator must be different individuals. No human flaggers permitted.

The field crew and the mixer/loaders: Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, goggles or a face shield, socks and shoes during mixing, loading, clean-up and repair.

It is desirable that the pilot has communication capabilities at each treatment site at the time of application. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking.

Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

### **Product Specific Precautions:**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-855-264-6262 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

**Volume:** THRASHER® must be applied in volume rates of not less than 30 L/ha. For best results when there is a heavy crop canopy, or when the majority of the weeds are cow cockle, smartweed or pigweed, a volume rate of 40 L/ha is recommended.

**Spray Buffer Zones:** Appropriate spray buffer zones should be established between treatment areas and aquatic systems and treatment areas and significant wildlife habitat.

#### 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.

#### HERBICIDE RESISTANCE MANAGEMENT:

For resistance management, please note that THRASHER® is a Group 4 and 6 herbicide. Any weed population may contain or develop plants naturally resistant to THRASHER® and other Group 4 and 6 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 THRASHER® or other Group 4 and 6 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 or at www.adama.com/canada.

#### **SPRAY BUFFER ZONES:**

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), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Seasonal water bodies require buffer zones if there is water in them during application. Water bodies which do not fill on an annual basis need not be buffered.

| Method of Crop |            |                | Spray Buffer Zones (metres) Required for the Protection of: |              |                     |              |             |
|----------------|------------|----------------|---|--------------|---------------------|--------------|-------------|
| Application    |            |                | Freshwater Habitat of                                       |              | Estuarine/Marine    |              | Terrestrial |
|                |            |                | Depths:   |              | Habitats of Depths: |              | Habitat     |
|                |            |                | Less than 1   | Greater than | Less than 1         | Greater than |             |
|                |            |                | m   | 1 m          | m                   | 1 m          |             |
| Field sprayer  | All crops  |                | 1   | 1            | 1                   | 1            | 1           |
|                | Barley and | Fixed wing     | 20  | 5            | 1                   | 1            | 55          |
|                | wheat      | Rotary<br>wing | 20  | 3            | 1                   | 1            | 45          |

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.

### **SPRING WHEAT AND BARLEY (not underseeded to legumes)**

**Spray Volume and Pressure:** For ground application, apply in 50 to 100 L of water per hectare at a pressure of 275 kPa. For aerial application, apply in a minimum of 30 L of water per hectare. For best results when there is a heavy crop canopy, or when the majority of the weeds are cow cockle, smartweed or pigweed, a volume rate of 40 L/ha is recommended.

**Timing:** Spring wheat and barley may be treated from the 4-leaf stage until the early flag leaf stage. Application before the 4-leaf stage may injure the crop.

**Application Rate:** 1.25 L/ha

Do not apply more than once per year.

## **Pre-Harvest Interval:**

- Do not permit livestock to graze fields within 30 days after application.
- Do not harvest forage or cut hay within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

## WEEDS CONTROLLED:

| Common Name                | Leaf Stage*           |  |  |
|----------------------------|-----------------------|--|--|
| American nightshade        | 4 leaf                |  |  |
| Ball mustard               | 4 leaf                |  |  |
| Bluebur                    | 4 leaf                |  |  |
| Cocklebur                  | 4 leaf                |  |  |
| Common buckwheat           | 8 leaf                |  |  |
| Common groundsel           | 8 leaf                |  |  |
| Common ragweed             | 4 leaf                |  |  |
| Cow cockle                 | 4 leaf                |  |  |
| Flixweed                   | 4 leaf                |  |  |
| Green smartweed            | 4 leaf                |  |  |
| Kochia                     | 5 cm high (1-12 leaf) |  |  |
| Lady's-thumb               | 4 leaf                |  |  |
| Lamb's-quarters            | 8 leaf                |  |  |
| Night-flowering catchfly   | 4 leaf                |  |  |
| Pale smartweed             | 4 leaf                |  |  |
| Redroot pigweed            | 4 leaf                |  |  |
| Russian thistle            | 5 cm high (2-12 leaf) |  |  |
| Shepherd's purse           | 4 leaf                |  |  |
| Stinkweed                  | 8 leaf                |  |  |
| Tartary buckwheat          | 8 leaf                |  |  |
| Triazine resistant pigweed | 4 leaf                |  |  |
| Velvetleaf                 | 8 cm high             |  |  |
| Volunteer canola           | 4 leaf                |  |  |
| Volunteer sunflower        | 4 leaf                |  |  |
| Wild buckwheat             | 8 leaf                |  |  |
| Wild mustard               | 8 leaf                |  |  |

<sup>\*</sup>Weeds can be controlled up to the recommended stage.

# THRASHER® + ACHIEVE® LIQUID

**Spray Volume and Pressure:** When using ground equipment, apply in 50 to 100 litres of water per hectare at a pressure of 275 kPa. For aerial application, apply in 30 to 45 litres of water per hectare.

**Timing:** Applications of THRASHER® and Achieve® Liquid tank-mixtures should be made to spring wheat, durum wheat or spring barley from the 4 leaf stage until the early flag leaf stage.

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Application before the 4-leaf stage may injure the crop.

**Application Rate:** THRASHER® at 1.25 L/ha tank-mixed with Achieve® Liquid at 0.5 L/ha. When using this tank-mixture, add Turbocharge® to the spray tank at a concentration of 0.5% v/v (i.e. 0.5 L Turbocharge® per 100 L of spray solution). Do not apply more than once per year.

**WEEDS CONTROLLED:** As listed for THRASHER® alone plus those listed on the Achieve® Liquid label.

**NOTE:** THRASHER® plus Achieve® Liquid tank-mixtures can be used in all varieties of spring and durum wheat and all 2 or 6 row varieties of barley (malting and feed varieties). Only apply this mixture to spring wheat, durum wheat and spring barley that is NOT UNDERSEEDED TO LEGUMES.

DO NOT APPLY BY AIR.

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