

2019-1321
2019-09-25
(Sleeve)

GROUP	4	HERBICIDE
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NUFARM

EMBUTOX®
Liquid Herbicide

CONTAINS 2,4-DB EMULSIFIABLE CONCENTRATE

For use in seedling legume and grass forages, cereals (wheat, barley and oats) and pastures.

AGRICULTURAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

ACTIVE INGREDIENT: 2,4-DB ... 625 g/L (present as 2-ethyl hexyl ester)

REGISTRATION NO. 27912 PEST CONTROL PRODUCTS ACT

CAUTION POISON

(1 to 450 Litres)

Nufarm Agriculture Inc.
5101, 333 - 96th Ave NE
Calgary, Alberta T3K 0S3
1-800-868-5444

EMBUTOX is a registered trademark of Nufarm Agriculture Inc.

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PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN.

Apply only when the potential for drift to areas of human habitation or areas of human activity (houses, cottages, schools and recreational areas) is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

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.

If mixing and loading more than 395 L in a day, a closed mix/load system is required.

For groundboom application, if applying more than 395 L in a day, a closed cab tractor is required.

Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes IMMEDIATELY. After use, wash hands and other exposed skin. Avoid breathing spray mist.

DO NOT enter or allow workers to enter treated areas during the restricted-entry intervals (REIs) specified in the following table:

Crop	Postapplication Activity	Restricted-Entry Interval
Wheat, barley, oats	Scouting	3 days
	All other activities	12 hours
Seedling alfalfa and bird's-foot trefoil, seedling clovers, seedling grasses for forage, pastures containing forage legumes	All activities	12 hours

ENVIRONMENTAL PRECAUTIONS:

Avoid contamination of ponds, streams, rivers and other water sources.

This product contains aromatic petroleum distillates which are toxic to aquatic organisms.

TOXIC to non-target terrestrial plants. Observe 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.

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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.

FIRST AID:

If swallowed, DO NOT INDUCE VOMITING. Get medical attention or contact a poison control centre IMMEDIATELY.

In case of skin contact, remove contaminated clothing and wash skin thoroughly with soap and water.

If in eyes, flush with plenty of water for 15 minutes, and get medical attention or contact a poison control centre IMMEDIATELY.

If inhaled, remove to fresh air and get medical attention or contact a poison control centre IMMEDIATELY.

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

TOXICOLOGICAL INFORMATION:

DO NOT induce vomiting. No specific antidote. Employ supportive care. Treatment should be based on judgement of the physician in response to reactions of the patient.

EMERGENCY TELEPHONE NUMBERS:

For spills or transportation accidents, Chemtrec, 1-800-424-9300.

For health or environmental emergencies, ProPharma Group, 1-877-325-1840.

For product and use information, Nufarm Agriculture Inc., 1-800-868-5444.

STORAGE CONDITIONS:

Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. May be stored at any temperature. SHAKE WELL BEFORE USING.

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.

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

For 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 Returnable-Refillable Containers:

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For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

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 this label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use this product in a way that is inconsistent with the directions on the label.

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(Booklet)

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DIRECTIONS FOR USE:

RESISTANCE-MANAGEMENT RECOMMENDATIONS:

For resistance management, EMBUTOX Liquid Herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to EMBUTOX Liquid Herbicide and other 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 EMBUTOX Liquid Herbicide or other Group 4 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 Nufarm Agriculture Inc. at 1-800-868-5444 or at www.nufarm.ca.

GENERAL USE PRECAUTIONS:

EMBUTOX Liquid Herbicide may cause damage to susceptible crop, ornamental, and other plants, even in minute quantities.

Avoid spray drift to any desirable vegetation. Coarse sprays are less likely to drift.

Do not spray during periods of high winds.

A minimum rotational crop plant-back interval of 30 days must be observed for crops other than those listed on the label.

Do not graze or cut treated crops for forage or **hay** until 30 days after application.

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DO NOT apply using aerial application equipment.

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.

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).

Method of application	Crop	Buffer Zones (metres) Required for the Protection of Terrestrial Habitat:
Field sprayer	Seedling alfalfa (direct or underseeded), Bird's-foot trefoil (direct or underseeded), Seedling clovers (direct or underseeded), Seedling grasses for forage	1
	Pasture containing forage legumes	2

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.

The buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Drift Mitigation page of the Pesticides section of Canada.ca.

MIXING:

To ensure even mixing, half fill the sprayer tank with clean water, add the required amount of EMBUTOX Liquid Herbicide and agitate thoroughly. Add the remainder of the water and agitate before spraying. Wash sprayer thoroughly after use.

EQUIPMENT AND SPRAY VOLUME:

Apply in 150 to 200 litres of water per hectare by ground equipment.

Higher water volumes will reduce the risk of crop injury.

Use spray nozzles and pressures that deliver a medium to coarse quality spray.

Avoid generating fine, driftable droplets.

TANK MIXES:

EMBUTOX Liquid Herbicide may be recommended in tank mix with other products.

Consult the label of the tank mix partner product, and follow the most stringent set of precautions, restrictions and directions for use.

CROPS, TIMING, RATES AND METHODS OF APPLICATION:

Use the dose required to control the weeds present.

To minimize the risk of crop injury, do not exceed the recommended rate listed for the crop.

Higher rates may be required to control certain weed species. Rates above those recommended for a crop may result in significant crop injury, and should only be used when the risk of crop injury will be offset by the benefits of enhanced weed control.

Apply in warm weather when the crop and weeds are growing well, and the weeds are at a susceptible stage.

Avoid application during drought conditions or during exceptionally hot weather.

CROP:

Seedling Alfalfa and Bird's-foot Trefoil, Direct or Underseeded

APPLICATION TIME:

From the first to the fourth trifoliate leaf stage.

For companion crop see below.

METHOD:

Ground application.

RECOMMENDED RATE PER HECTARE: Up to 2.25 L

PRECAUTION: Substantial crop injury and reduction in forage dry matter may occur when EMBUTOX Liquid Herbicide is applied in accordance with the label.

CROP:

Seedling Clovers, Direct or Underseeded

APPLICATION TIME:

As soon as possible after the first trifoliate leaf stage.

DO NOT use on Sweet Clover.

Red and Alsike clover may be damaged.

TROPOTOX[®] PLUS is recommended for use in pure stands of Red clover.

METHOD:

Ground application.

RECOMMENDED RATE PER HECTARE: Up to 2.25 L

PRECAUTION: Substantial crop injury and reduction in forage dry matter may occur when EMBUTOX Liquid Herbicide is applied in accordance with the label.

CROP:

Cereals (Wheat, Barley and Oats)

APPLICATION TIME:

After the crop has five fully expanded leaves but before the early flag leaf (shot-blade) stage.

Oats may be damaged if treated before the 5-leaf stage.

METHOD:

Ground application.

RECOMMENDED RATE PER HECTARE: Up to 2.25 L

CROP:

Pasture Containing Forage Legumes

APPLICATION TIME:

After cutting or grazing preferably when regrowth is not above 7.5 cm high.

Where thistle, yellow rocket or chicory are present grazing is preferable to cutting.

For the control of narrow-leaved hawk's-beard and yellow rocket in dormant established alfalfa only, apply EMBUTOX Liquid Herbicide at 2.25 to 2.75 L/ha in the fall after alfalfa has ceased growing.

Do not apply to established alfalfa that is actively growing as crop injury may result.

Damage, especially to established alfalfa, may occur and is likely to increase in severity the longer treatment is delayed beyond the stage recommended above.

METHOD:

Ground application.

RECOMMENDED RATE PER HECTARE: Up to 2.75 L

CROP:

Seedling Grasses for Forage (Smooth Bromegrass, Creeping Red Fescue, Meadow Fescue, Tall Fescue, Orchard Grass, Timothy, Crested Wheatgrass, Intermediate Wheatgrass, Streambank Wheatgrass, Tall Wheatgrass)

APPLICATION TIME:

At the 2- to 4-leaf stage of the seedling grasses.

METHOD:

Ground application.

RECOMMENDED RATE PER HECTARE: Up to 2.25 L

WEEDS CONTROLLED WITH 1.75 L PER HECTARE EMBUTOX LIQUID HERBICIDE:

Stinkweed, Ragweed, Redroot pigweed, Shepherd's-purse, Lamb's-quarters, Wormseed mustard, Ball mustard, Wild mustard*.

APPLICATION TIME:

Spray when the weeds are in the seedling stage.
Resistance increases with age.

* Wild mustard plants beyond the 4-leaf stage are not likely to be controlled by EMBUTOX Liquid Herbicide alone. For better wild mustard and narrow-leaved hawk's-beard control in seedling alfalfa and Bird's-foot trefoil, EMBUTOX Liquid Herbicide at the reduced rate of 1.25 L/ha may be tank-mixed with MCPA amine salt at 35 g active ingredient/ha (for example, 70 ml/ha of MCPA Amine 500). This tank-mix may increase crop stunting.

WEEDS CONTROLLED WITH 2.25 - 2.75 L EMBUTOX LIQUID HERBICIDE PER HECTARE:

The higher rate is more effective and should be used where tolerated by the crop.

Oak-leaved goosefoot:	Spray at or before 2-leaf stage.
Wild buckwheat:	Spray at or before 2-leaf stage.
Wild radish:	Spray at or before 2-leaf stage.
Bull thistle:	Spray at rosette to early bud stage.
Perennial sow-thistle:	Spray at rosette stage.
Chicory:	Spray at rosette stage.
Canada thistle:	Top growth control, spray from 15 cm to early bud stage.
Curled dock:	Early growth.
Plantain:	Before flowering.
Field bindweed:	For best results spray in late summer. Spring treatment controls top growth
Yellow rocket:	Spray from the third week of September to the middle of October.

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Narrow-leaved hawk's-beard Spray at rosette stage in late fall after legume growth ceases.

**WEEDS MODERATELY SUSCEPTIBLE TO 2.75 L EMBUTOX LIQUID
HERBICIDE PER HECTARE:**

Horsetail: Top growth control, spray when 10 to 13 cm high.

Dandelion: Top growth control, spray before bud stage.

Lady's-thumb: Seedlings only stunted.

Green smartweed: Seedlings only stunted.

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