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| GROUP | 4 | HERBICIDE |
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**Nufarm**

**MCPA-K  
Liquid Herbicide**

**CONTAINS MCPA SALT SOLUTION**

For use in wheat, barley, oats, rye, legumes, flax (do not use on low linolenic acid varieties) and corn.

**AGRICULTURAL**

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING**

**ACTIVE INGREDIENT:** MCPA, present as potassium salt ... 400 g a.e. /L

REGISTRATION NO. 17564 PEST CONTROL PRODUCTS ACT

WARNING POISON

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

24 Hour Emergency Response Number 1-800-424-9300

Net Contents: 10L

**PRECAUTIONS:****KEEP OUT OF REACH OF CHILDREN.**

Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes immediately. Do not inhale fumes. Avoid breathing spray mist. After use wash hands and other exposed skin. Avoid spray drift. Store the container tightly closed and away from seeds, feeds, fertilizer, plants and foodstuffs.

**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.

**DO NOT APPLY BY AIR**

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).

**PROTECTIVE CLOTHING AND EQUIPMENT:**

**Handling the concentrate (mixing and loading):** Wear a long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. Remove and wash contaminated clothing before reuse.

**Handling the dilute spray solution (during application or repairing or cleaning equipment):** Wear a long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. Remove and wash contaminated clothing before reuse. Applicators using a closed-cab are not required to wear chemical-resistant gloves.

**ENVIRONMENTAL HAZARDS:**

Toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

**Surface runoff:**

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before the treatment. Site characteristics and conditions may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted, fine-textured, or low in organic matter such clay).

Avoid applying this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a strip of untreated vegetation (buffer zone) between the treated area and the edge of the water body.

**Leaching:**

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sand, loamy sand and sand loam soils) and/or the depth to the water table is shallow.

**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.

**In case of skin or clothing contact**, 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 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.

**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.

Take 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 judgement of the physician in response to reactions of the patient. High concentrations of MCPA may cause severe irritation to the eyes. Symptoms of overexposure to MCPA could include slurred speech, twitching, jerking and spasms, drooling, low-blood pressure and unconsciousness. Treat symptomatically.

**EMERGENCY TELEPHONE NUMBERS:**

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

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

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

**STORAGE:**

Insecticides and fungicides should be segregated from herbicides so as to prevent the possibility of cross-contamination. Store at temperatures above 0°C. If subjected to freezing temperatures, warm to at least 5°C and mix thoroughly. **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:**

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

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**DIRECTIONS FOR USE:**

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.



**RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, Nufarm MCPA-K liquid herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Nufarm MCPA-K 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 Nufarm MCPA-K 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](http://www.nufarm.ca).

**USE PRECAUTIONS:**

Avoid spray drift to any desirable vegetation NOT listed on the label as damage may occur. Avoid contamination of ponds, streams, rivers 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.

- Do not permit lactating dairy animals to graze fields within 7 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.
- Do not harvest forage or cut hay within 7 days after application.

**TIMING:**

For best results spray when WEED ARE YOUNG AND ACTIVELY GROWING. Apply in good growing conditions. Application must be made before the crop canopy shields the weeds.

**SPRAYER:**

Clean all spray equipment thoroughly before use. Select nozzle tips to apply the recommended volume per hectare. Higher water volumes will reduce the risk of crop injury. Calibrate the sprayer and adjust the boom height to ensure uniform coverage. Nozzles must be in good condition and spraying the same volume. Flat fan nozzle tips are recommended.

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

**Buffer Zones:**

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, rangelands, 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.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

| Method of Application | Crop      | Buffer Zones (metres) Required for the Protection of: |                  |                                      |                  |                     |
|-----------------------|-----------|---|------------------|--------------------------------------|------------------|---------------------|
|                       |           | Freshwater Habitat of Depths:                         |                  | Estuarine/Marine Habitats of Depths: |                  | Terrestrial Habitat |
|                       |           | Less than 1 m   | Greater than 1 m | Less than 1 m                        | Greater than 1 m |                     |
| Field Sprayer*        | All crops | 1   | 1                | 1                                    | 1                | 4                   |

\*For field sprayer application, buffer zones can be reduced with the use of drift-reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

**MIXING:**

Shake this product well before using. Half fill the spray tank with clean water. Add the required amount of product and agitate thoroughly. Fill the tank with clean water and agitate well before use.

**NOTE:** If spray solution has been left standing, agitate thoroughly before use.

**USES:**

**WHEAT, BARLEY, RYE, OATS (not underseeded with legumes):** Wheat, barley and rye may be sprayed from the full 3-leaf to the early flag leaf (shot blade) stage. DO NOT apply after the flag leaf stage. Oats may be treated from the 2-leaf to the 5-leaf stage. Treatment at the 3 to 4-leaf stage usually combines maximum crop tolerance with maximum weed susceptibility. The recommended safe crop rate for wheat and barley is 1.6 litres of product per hectare. The recommended safe crop rate for oats and rye is 1.3 litres of product per hectare. Higher rates may be needed to control certain weed species. Do not exceed 2.18 L/ha per year. Possible crop injury from these higher rates is usually offset by the increased yield of the cleaner crop. Use 50 or more litres of water per hectare. Spraying with higher volumes of water (100 - 150 litres per hectare) may reduce the risk of crop injury.

Do not apply more than one treatment per year.

**FALL RYE, WINTER WHEAT:** Treat in the spring between full tillering and the flag leaf (shot blade) stage. DO NOT apply in the fall. The recommended safe crop rate for winter wheat is 1.5 litres of product per hectare and for fall rye is 1.0 litres of product per hectare. Higher rates may be needed to control certain weed species. Do not exceed 2.18 L/ha per year. Possible crop injury from these higher rates is usually offset by the increased yield of the cleaner crop. Use 50 or more litres of water per hectare. Spraying with higher volumes of water (100 – 150 litres per hectare) may reduce the risk of crop injury.

Do not apply more than one treatment per year.

**CEREALS UNDERSEEDED WITH LEGUMES:** Apply when cereals are in the full 3-leaf to the early flag leaf (shot blade) stage and the seedling legumes are between the first and third trifoliate leaf stage and not more than 10 cm tall. The recommended safe crop rate for wheat and barley is 1.6 litres of product per hectare. The recommended safe crop rate for oats and rye is 1.3 litres of product per hectare. Do not exceed 2.18 L/ha per year. Use 100 or more litres of water per hectare. Some injury to the legumes may occur, especially if growing conditions are very favourable. Spraying in the evening and/or using increased volumes of water (150 or more litres per hectare) may reduce the risk of injury.

Do not apply more than one treatment per year.

**CLOVER:** DO NOT apply to sweet clover. Use a maximum rate of 0.75 L/ha of product per hectare. The recommended safe crop rate is 0.7 litres per hectare. Under favourable growing conditions, do not exceed the recommended safe crop rate.

Do not apply more than one treatment per year.

**ALFALFA AND BIRD'S-FOOT TREFOIL:** A tank-mix of Nufarm MCPA-K liquid herbicide at 90 mls per hectare plus EMBUTOX® Liquid Herbicide at 1.25 litres per hectare is recommended. Apply in 150 litres or more water per hectare. Apply when cereals are between the 5-leaf and the early flag leaf stage and the legumes are from the first to the third trifoliolate leaf stage.

Do not apply more than one treatment per year.

**ESTABLISHED ALFALFA (spring growth):** Treat in the spring when annual weeds start to emerge and the spring growth of alfalfa is less than 2.5 – 5 cm tall. Apply 1.25 litres of Nufarm MCPA-K liquid herbicide per hectare. DO NOT graze within 7 days of application. There is a possibility that plants poisonous to livestock will appear more palatable and could be grazed more readily after Nufarm MCPA-K liquid herbicide treatment (e.g. tansy ragwort, water hemlock, poison hemlock, death camas). Suitable precautions should be taken when such plants are present. Livestock should not be allowed to graze the treated area until poisonous plants have been removed, are dead or have resumed a normal growth habit.

Do not apply more than two treatments per year, with a minimum retreatment interval of 90 days.

**FLAX (do not use on low linolenic acid varieties):** Apply Nufarm MCPA-K liquid herbicide from time flax is 5 cm tall and before the bud stage. Apply 0.875 to 2.1 litres of product in 40 to 150 litres of water per hectare. Some delay of maturity in flax should be expected when flax is treated with 1.25 litres or more per hectare of Nufarm MCPA-K liquid herbicide. Higher water volumes (100 – 150 litres of water per hectare) will help reduce crop injury.

Do not apply more than one treatment per year.

**CORN (post-emergent):** For control of broadleaf weeds in corn apply Nufarm MCPA-K liquid herbicide at up to 1.25 litres per hectare. Rates of 1.25 litres per hectare or more may cause severe injury. Nufarm MCPA-K liquid herbicide may be applied in 100-150 litres of water per hectare as an overall spray up to the time the corn is 15 cm tall (leaf extended) but before the six-leaf stage. **DAMAGE TO THE CORN MAY RESULT IF AN OVERALL SPRAY IS APPLIED BEYOND THIS STAGE.** In case of drought, delay spraying until one week following rain. Avoid cultivation for three weeks following spraying. Do not add oil or surfactant.

Do not apply more than one treatment per year. When hand-harvesting corn (field & sweet), the Re-entry Interval (REI) and Pre-harvest Interval (PHI) are 15 days.

#### **WEEDS CONTROLLED:**

**(DO NOT exceed the rates given for each specific crop identified in the Uses section)**

**SUSCEPTIBLE:** Easy-to-kill weeds (2 to 4-leaf stage). Use 0.925 to 1.25 litres per hectare. Use the higher rate for weeds in the bud stage, dry or cold weather or heavy

infestations: Bluebur, burdock, cocklebur, common plantain, flixweed, lamb's-quarters, kochia, mustard (ball, hare's ear, Indian, tumble), prickly lettuce, ragweed (common, false and giant), Russian pigweed, shepherd's-purse, stinkweed, wild radish, wild sunflower.

**MORE RESISTANT:** Harder-to-kill weeds (2 to 4-leaf stage). Use 1.5 to 2.0 litres per hectare. Use the higher rate for weeds in the bud stage, dry or cold weather or heavy infestations. Weeds listed under susceptible plus annual sow thistle, biennial wormwood, curly dock, common purslane, dandelion, field peppergrass, goat's-beard, hemp-nettle, kochia, mustard (dog and tansy), pigweed (prostrate and redroot), smartweed.

**TOP GROWTH CONTROL ONLY:** (2 to 4-leaf stage).

**SUSCEPTIBLE:** Use 0.925 to 1.25 litres per hectare. Use the higher rate for larger weeds, dry or cold weather or heavy infestations: Field horsetail, vetch.

**MORE RESISTANT:** Use 1.5 to 2.0 litres per hectare. Use the higher rate for dry or cold weather or heavy infestation: Blue lettuce, Canada thistle, field bindweed, goosefoot, gumweed, hedge bindweed, hoary cress, perennial sow thistle, and Tartary buckwheat.

**PERSISTENT PERENNIALS:** Use 2.1 litres per hectare: Leafy spurge.  
The higher rates indicated for the control of more resistant weeds and persistent perennials may exceed the safe rate indicated for crops and may cause injury. This injury is often offset by a cleaner crop.

**CLEANING OF SPRAYER:**

Thoroughly clean the herbicide sprayer before applying any other chemical on crops which may be damaged (see USE PRECAUTIONS). Wash the outside of the sprayer and drain the tank completely. Remove and clean filters, screens and nozzle tips separately. Fill the sprayer tank with clean water. With the agitator running, flush out the lines and boom, then drain. Fill the sprayer with clean water and for each 100 L add 1 L household ammonia. Operate the pump and agitator for 15 minutes. If possible, let the solution remain in the tank and hoses overnight; recirculate and flush out the lines and boom, then drain. Rinse out twice with clean water, recirculating and draining each time. DO NOT contaminate irrigation or drinking water when cleaning the sprayer.

EMBUTOX® is a registered trademark of Nufarm Agriculture Inc.