

GROUP 14 + 15 HERBICIDE

Authority Supreme Herbicide

COMMERCIAL (AGRICULTURAL)

500 g/L Suspension Concentrate (SC)

For weed control in Field Pea, Chickpeas, and Soybean

GUARANTEE:

Pyroxasulfone.....250 g/L

Sulfentrazone.....250 g/L

Contains 5-chloro-2-methyl-4-isothiazolin-3-one at 0.0017% and 2-methyl-4-isothiazolin-3-one at 0.00056% as preservatives

Contains Petroleum Distillates

REGISTRATION NO. 32562

PEST CONTROL PRODUCTS ACT

Warning, contains the allergen sulfites

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

KEEP OUT OF REACH OF CHILDREN

Net Contents: 1 – 1000 L

FMC Corporation

2929 Walnut Street

Philadelphia, PA 19104

1-800-331-3148

Label

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 Product 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.

FIRST AID

If Swallowed

Call a poison control centre or doctor immediately for treatment advice. Do not give **any** liquid to the person. 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.

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

You may also contact **1-800-331-3148** for emergency medical treatment information.

TOXICOLOGICAL INFORMATION

Treat symptomatically.

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Apply only when the potential for drift to areas of human habitation or 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.

DO NOT apply by air.

Workers and applicators must wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves during mixing, loading, application, clean-up and repair.

Do not make more than one application per season.

Restricted Entry Interval

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

Important

- Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your area, consult the provincial agency responsible for pesticide regulation.
- Do not apply more than the allowed amount per hectare per twelve-month period. The twelve-month period is considered to begin upon the initial application.

ENVIRONMENTAL HAZARDS

TOXIC to aquatic organisms, small wild mammals, and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow. DO NOT use on coarse soils classified as sand which have less than 1% organic matter.

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.

Sulfentrazone is persistent and will last in the soils (carryover) for one to two years. **DO NOT APPLY AUTHORITY SUPREME HERBICIDE TO FIELDS TREATED WITH AUTHORITY 480 HERBICIDE or AUTHORITY SUPREME or ANY PRODUCT CONTAINING SULFENTRAZONE, IN THE PREVIOUS YEAR.**

STORAGE

Store in original container in cool, dry, well-ventilated location. STORE ABOVE 5°C TO KEEP PRODUCT FROM FREEZING. If frozen, thaw before use. If solid crystals are observed, warm material to above 15 °C by placing container in warm location. Shake or roll container periodically to redissolve solids.

To prevent contamination store this product away from food or feed.

DISPOSAL AND DECONTAMINATION

For information on disposal of unused, unwanted product, contact the manufacture or the provincial regulatory agency. Contact the manufacture and the provincial regulatory agency in case of a spill, and for clean-up spills.

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 refillable containers:

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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 rinsing to the spray mixture in the tank.
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GENERAL INFORMATION

Authority Supreme Herbicide is a selective soil applied herbicide for the control of annual grasses and annual broadleaf weeds in Field Pea, Chickpeas, and Soybean.

Authority Supreme Herbicide is formulated as a suspension concentrate containing a total of 500 grams of the active ingredients pyroxasulfone and sulfentrazone, per litre, intended for dilution with water for application.

Authority Supreme Herbicide is taken up by the plant roots and shoots.

Observe all instructions, mixing directions, application precautions and other label information of Authority Supreme Herbicide.

For Information regarding the Use of this Product visit www.fmccrop.ca.

6.

DIRECTIONS FOR USE

General Application Instructions

Authority Supreme Herbicide may be applied to the soil as a preplant or pre-emergence (to weed and crop) surface application. Do not make fall applications to any crops. See below for the proper rates of application according to soil texture and organic matter content.

All soil applications of Authority Supreme Herbicide require adequate rainfall for herbicidal activation. Dry weather following applications of Authority Supreme Herbicide may reduce effectiveness. Authority Supreme Herbicide may not control weeds that germinate after application but before an activating rainfall / irrigation, or weeds that germinate through cracks resulting from dry soil. However, when adequate moisture is received after dry conditions, Authority Supreme Herbicide may provide a reduced level of control of susceptible germinating weeds. When adequate moisture is not received after Authority Supreme Herbicide application, weed control may be improved by irrigation (do not use flood irrigation).

Excessive rainfall, irrigation, or prolonged wet soil conditions after application of Authority Supreme Herbicide from seed germination through seedling development, will increase the risk of seedling injury and growth inhibition, especially with shallow seeded crops.

Before applying, verification of Authority Supreme Herbicide selectivity on your crop variety must be confirmed to avoid injury to sensitive varieties. If variety tolerance is unknown, such as with new varieties, apply Authority Supreme Herbicide on a small area to confirm variety safety before use on large acreage.

General Use Restrictions

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT use flood irrigation to activate or incorporate Authority Supreme Herbicide.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT apply during periods of dead calm.

DO NOT apply during periods of gusty winds.

DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification.

DO NOT raise boom height above 60 cm above the crop or ground.

DO NOT use on peat or muck soils and soils with 7 % or more organic matter content.

DO NOT apply through any type of irrigation system.

DO NOT contaminate irrigation ditches or water used for domestic purposes.

DO NOT apply Authority Supreme Herbicide when environmental conditions may result in drift to non- target sites. Drift of this product may be harmful to non-target plants near the treatment area.

Sulfentrazone is persistent and will last in the soils (carryover) for one to two years.

DO NOT APPLY AUTHORITY SUPREME HERBICIDE TO FIELDS TREATED WITH AUTHORITY 480 HERBICIDE or AUTHORITY SUPREME, IN THE PREVIOUS YEAR.

In case of drought in any of those years, a subsequent application of Authority Supreme Herbicide should be further delayed by the equivalent number of years in which drought occurred. Authority Supreme Herbicide requires one (1) to two (2) cm of rain or irrigation water to be effective. If adequate moisture from rainfall or irrigation is not received within 7 to 10 days of application, a shallow incorporation no deeper than 5 cm may be needed to obtain adequate weed control.

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, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

| Method of application | Buffer Zones (metres) Required for the Protection of: | | |
|-----------------------|---|------------------|---------------------|
| | Freshwater Habitat of Depths: | | Terrestrial habitat |
| | Less than 1 m | Greater than 1 m | |
| Field sprayer | 5 | 3 | 10 |

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 field sprayer drift buffer zones for this product can be modified based on weather

conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

Mixing and Spraying Instructions

Authority Supreme Herbicide is a suspension concentrate intended for dilution with water. Use a minimum spray volume of 100 litres of solution per hectare and a spray pressure of 200-275 kPa.

Keep bypass line on or near bottom of tank to minimize foaming.

Spray Tank Preparation

It is important that spray equipment is clean and free of existing pesticide deposits before using this product. Follow the spray tank clean out procedures specified on the label of product previously applied before adding Authority Supreme Herbicide to the tank.

Mixing and Loading Instructions

For best results, fill spray tank with one half of the volume of clean water needed for the area to be treated. Start the agitation system. Slowly add the Authority Supreme Herbicide to the spray tank. Complete filling the spray tank to the desired level. Continuous spray tank agitation is required at all times to maintain a uniform spray solution. Make sure Authority Supreme Herbicide is thoroughly mixed before application.

Use the Authority Supreme Herbicide mixture immediately after mixing.

Use **W-A-L-E-S** tank-mix order

First, fill sprayer tank with water 1/3 to 1/2 full, add any fertilizer and pH adjuster, then add **W**ettable powders and water dispersible granules slowly, then **A**gitate tank mix thoroughly, then add **L**iquid flowables and suspensions, then add **E**mulsifiable concentrate formulations, and finally add **S**olution based products /Surfactants

Maintain constant agitation during application.

Do not store the sprayer overnight or for any extended period of time with the spray mixture remaining in the tank.

Sprayer Equipment Clean-Out

After spraying Authority Supreme Herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure:

1. Drain sprayer tank, hoses, and spray boom. Use a high-pressure detergent wash to remove physical sediment and residues from the inside of the sprayer tank and thoroughly rinse. Then thoroughly flush all sprayer hoses, booms, and nozzles with clean water.
2. Prepare a sprayer cleaning solution by adding three litres of ammonia (containing at least 3% active) per 100 litres of clean water. Prepare sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles.
3. Convenient and thorough cleaning of the sprayer can be achieved if the ammonia solution or fresh water is left in the spray tank, hoses, spray booms and spray nozzles overnight or during storage.
4. Drain the sprayer system. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray tips and all strainers and screens separately in an ammonia solution.
5. Properly dispose of all cleaning solution and rinsate in accordance with provincial guidelines and regulations.

Do not drain or flush equipment on or near desirable trees or plants.

Do not contaminate any body of water including irrigation water that may be used on other plants or crops.

Weeds Controlled or Suppressed

The following weeds are either controlled or suppressed by Authority Supreme Herbicide. Length of control is dependent on rate applied, amount of rainfall received following application and soil type. Please see crop specific use rates for rate recommendations based on soil type.

Grassy weeds

Control

Barnyardgrass

Brome (Downy, Japanese)

Suppression

Wild Oats

Crabgrass, Large
 Foxtail (Green, Yellow, Giant)
 Witchgrass

Broadleaf weeds

Control

Cleavers
 Cowcockle
 Kochia
 Lamb's-quarters
 Pigweed (Green, Redroot)
 Stinkweed
 Waterhemp, Common
 Wild Buckwheat

Suppression

Common Ragweed
 Wild Mustard

Soil Texture

Unless a specific soil texture is mentioned, rate tables throughout this label refer to table below for soil texture groups: coarse, medium, medium-fine and fine. This includes a complete listing of soil textures included in each of the soil texture groupings.

| Coarse | Medium | Medium-Fine | Fine |
|------------|-----------|-----------------|------------|
| Sand | Loam | Sandy clay | Silty clay |
| Loamy sand | Silt loam | loam | Clay loam |
| Sandy loam | Silt | Sandy clay | Clay |
| | | Silty clay loam | |

Rates of Application: Soybeans, Chickpeas and Field Peas

Authority Supreme Herbicide can be applied preplant or preemergence up to three days after planting. Crop seeds must be planted a minimum of 2.5 cm deep for chickpeas, field peas, and soybeans. **DO NOT** apply Authority Supreme Herbicide if crop has emerged.

| Application Timing | Rate (ml/ha) of Authority Supreme Herbicide |
|---|---|
| Setup Treatment (preplant or preemergence) | 400 ml/ha (early season control only) |
| Residual Treatment (preplant or preemergence) | 500 ml/ha (coarse/medium texture, O.M. 1 – 4%) 600 ml/ha (medium-fine/fine texture, O.M. 4 - 7%) |

A set-up treatment is an application to remove early weed competition to allow good crop establishment. An in-crop application of herbicide may be required subsequently to control emerged weeds.

Tank Mixes:

Authority Supreme Herbicide can be mixed with one or more herbicide products, provided that the tank mix product labels do not prohibit such mixing. When applied as a tank-mix combination, read and observe all label directions, including rates, personal protective equipment, restrictions and precautions for each product used in the tank-mix. Always use in accordance with the most restrictive label restrictions and precautions. Refer to the Crop-Specific Information section to determine which tank mix products can be applied to specific crops.

| |
|-------------------|
| Glyphosate |
|-------------------|

| |
|--|
| Tank mix Authority Supreme with labeled rates of glyphosate(that are registered for the same uses). |
|--|

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 should contact FMC Corporation at 1-800-331-3148 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. 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 FMC Corporation.

Crop Rotational Restrictions

If any crop treated with Authority Supreme Herbicide is lost, registered crops on this label can be replanted immediately. **DO NOT** make a second application of Authority Supreme Herbicide. For any crop other than chickpea, field pea or soybean, please use the crop rotation interval section below for directions.

| Crop | Crop Rotation Interval (Months) |
|----------|---------------------------------|
| Chickpea | Anytime |

| | |
|------------------------|---------|
| Corn, field | 12 |
| Field pea | Anytime |
| Soybeans | Anytime |
| Sunflowers | 12 |
| Spring and Durum wheat | 12 |
| Winter wheat | 16 |

For crops listed in the rotational crop table, the minimum replant interval listed in the table must be observed. For crops not listed in the rotational crop table, A MINIMUM ROTATIONAL CROP INTERVAL OF 36 MONTHS must be observed and a representative bioassay of the field must be conducted with the rotational crop and adequate soil moisture to evaluate potential crop sensitivity.

If there is a lack of adequate or normal soil moisture due to drought conditions following an application of Authority Supreme Herbicide, the minimum rotational crop interval listed in the table must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Authority Supreme Herbicide.

RESISTANCE MANAGEMENT

For resistance management Authority Supreme Herbicide contains a Group 14 and Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to Authority Supreme Herbicide and other Group 14 or 15 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 Authority Supreme Herbicide or other Group 14 and 15 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 FMC CORPORATION representatives at **www.fmccrop.ca**.

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