

**GROUP 14 15 HERBICIDES**

## **AUTHORITY® SUPREME HERBICIDE**

COMMERCIAL (AGRICULTURAL)  
Suspension Concentrate

For weed control in field pea, chickpeas, and soybean

**ACTIVE INGREDIENTS:**

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 of Canada Limited**  
6755 Mississauga Road, Suite 204  
Mississauga, ON  
L5N 7Y2  
1-833-362-7722

**IN CASE OF EMERGENCY, CALL 1-800-331-3148 (24 HOURS)**

## **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.

## **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 using aerial application equipment.

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 PRECAUTIONS**

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.

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 of 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:**

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 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.
2. Make the empty, rinsed container unsuitable for further use.

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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.**

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## **GENERAL INFORMATION**

Authority<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Supreme Herbicide is taken up by the plant roots and shoots.

Observe all instructions, mixing directions, application precautions and other label information of Authority<sup>®</sup> Supreme Herbicide.

For information regarding the use of this product call 1-833-362-7722 or visit <https://ag.fmc.com/ca/en>.

## **DIRECTIONS FOR USE**

### **General Application Instructions**



Authority® Supreme Herbicide may be applied to the soil as a pre-plant 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** 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.

**DO NOT** apply **AUTHORITY® SUPREME Herbicide (or any other product containing pyroxasulfone) in the spring to fields that were treated with applications of FOCUS® Herbicide (or any other product containing pyroxasulfone) during the previous fall.**

**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. 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> Supreme Herbicide is thoroughly mixed before application.

Use the Authority<sup>®</sup> Supreme Herbicide mixture immediately after mixing.

**Tank Mixtures:** Fill spray tank one-half to two-thirds full with water; with agitator operating add

the recommended amount of ingredients using the following order:

- Wettable powders and dispersible granules
- Agitate tank mix thoroughly
- Micro-encapsulated suspensions
- Liquid flowables and suspensions
- Emulsifiable concentrate formulations
  - Fill spray tank nearly full with water
- Glyphosate formulations
- Surfactants
  - Complete filling the spray tank to the desired level

Maintain agitation during filling, mixing and application. When using drift reducing agents, follow specific product label instructions for order of addition to spray tank.

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

**Suppression**

Wild Oats

**Broadleaf weeds**

**Control**

Cleavers  
 Cowcockle  
 Groundsel, Common  
 Kochia  
 Lamb's-quarters  
 Nightshade, Eastern black  
 Pigweed (Green, Redroot, Powell)  
 Purslane, Common  
 Stinkweed  
 Waterhemp, Common  
 Wild Buckwheat  
 Woodsorrel, Yellow

**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.

<b>Coarse</b>	<b>Medium</b>	<b>Medium-Fine</b>	<b>Fine</b>
Sand Loamy sand Sandy loam	Loam Silt loam Silt	Sandy clay loam Sandy clay Silty clay loam	Silty clay Clay loam Clay

**Rates of Application: Soybeans, Chickpeas and Field Peas**

Authority® Supreme Herbicide can be applied pre-plant or pre-emergence 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.

<b>Application Timing</b>	<b>Rate (ml/ha) of Authority® Supreme Herbicide</b>
Setup Treatment* (pre-plant or pre-emergence)	400 ml/ha (early season control only)
Residual Treatment (pre-plant or pre-emergence)	500 ml/ha (medium texture, O.M. 1 – 3%) 600 ml/ha (medium-fine/fine texture, O.M. 3 - 6%)

\*A set-up treatment is an application to remove early weed competition to allow good crop

establishment.

**Do not apply to soils classified as coarse-textured soils.**

**Do not use on peat or muck soils.**

**Do not apply on any type of soils with an organic matter content greater than 6%.**

**Do not use on soils with a pH of 7.8 or greater.**

**Tank Mixes:**

Authority<sup>®</sup> 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.

**AUTHORITY<sup>®</sup> SUPREME HERBICIDE PLUS GLYPHOSATE**

<b>Glyphosate</b>
Tank mix Authority <sup>®</sup> Supreme with labeled rates of glyphosate (that are registered for the same uses).

**AUTHORITY<sup>®</sup> SUPREME HERBICIDE PLUS EXPRESS<sup>®</sup> SG HERBICIDE PLUS GLYPHOSATE**

This tank mix is intended for pre-plant application to control broadleaf weeds and grasses in field peas, chickpeas and soybeans. Fields treated with this tank mix can be seeded to field peas, chickpeas or soybeans a minimum of 24 hours after application.

An adjuvant is not required for this tank mix.

**Injury to pulse crops may occur on coarse-textured soils, low in organic matter (less than 3%), or in fields with variable soils, gravelly areas, sandy areas or eroded knolls. Avoid planting pulse crops in soils containing more than 50% sand.**

In addition to the weeds controlled by AUTHORITY<sup>®</sup> SUPREME Herbicide, this tank mix will control or suppress emerged weeds listed in the following table:

<b>Tank Mix Partner</b>	<b>Application Rate</b>	<b>Application Stage</b>	<b>Weeds Controlled (emerged only)</b>	<b>Weeds Suppressed * (emerged only)</b>
EXPRESS <sup>®</sup> SG Herbicide + glyphosate (present as	15 g/ha  + 450 g ae/ha	Up to 8 cm	Canada fleabane, common ragweed, narrow leaved hawk's beard	Scentless chamomile

Tank Mix Partner	Application Rate	Application Stage	Weeds Controlled (emerged only)	Weeds Suppressed * (emerged only)
potassium salt, isopropylamine salt, ammonium salt)		Up to 15 cm	Dandelion, downy brome, flixweed, giant foxtail, green foxtail, hemp nettle, kochia, lady's thumb, lamb's-quarters, Persian darnel, redroot pigweed, Russian thistle, stinkweed, volunteer barley, volunteer canola (including glyphosate-tolerant varieties), volunteer flax, volunteer wheat, wild mustard, wild oats	
		Up to 3-leaf	Cow cockle, wild buckwheat	
		Rosette		Canada thistle White cockle

\*Weed suppression is a visual reduction in weed competition (reduced population or vigour) as compared to an untreated area. Degree of suppression will vary with size of weed and environmental conditions prior to and following treatment.

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 of Canada Ltd. at 1-833-362-7722 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label.

### **Crop Rotational Restrictions**

If any crop treated with Authority<sup>®</sup> Supreme Herbicide is lost, registered crops on this label can be replanted immediately. **DO NOT** make a second application of Authority<sup>®</sup> 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)
Barley	12
Canola	12
Chickpea	Anytime
Corn, field	12
Field pea	Anytime
Lentils	24

Crop	Crop Rotation Interval (Months)
Mustard	12
Oats	12
Soybeans	Anytime
Sunflowers	12
Sugar beet	36
Spring and Durum wheat	12
Winter wheat	4

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<sup>®</sup> 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<sup>®</sup> Supreme Herbicide.

### **RESISTANCE MANAGEMENT**

For resistance management Authority<sup>®</sup> Supreme Herbicide contains a Group 14 and Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to Authority<sup>®</sup> 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<sup>®</sup> 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 of Canada Ltd. representatives at <https://ag.fmc.com/ca/en>.

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