

ADAMA GLUFOSINATE 150 SL

COMMERCIAL

SOLUTION



EYE AND SKIN IRRITANT

REGISTRATION NUMBER 34833 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENT: glufosinate-ammonium 150 g/L

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

**For emergency medical help call PROPHERMA 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 0X11
1-855-264-6262

NET CONTENTS: 1 L – Bulk

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Harmful or fatal if absorbed through the skin. Harmful if swallowed. Causes eye irritation. DO NOT get in eyes, on skin or on clothing. Avoid breathing spray mist. Wash thoroughly after using and before eating, drinking or smoking.

Protective Clothing and Equipment: Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. Gloves and protective eyewear (goggles or face shield) are not required during application within a closed cab and/or cockpit.

Restricted-entry Restriction: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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.

If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262.

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

If swallowed: Call a poison control center 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 center or doctor. Do not give anything by mouth to an unconscious person.

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 center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center 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 center or doctor for treatment advice.

TOXICOLOGICAL INFORMATION:

Note to Physician: If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration.

ENVIRONMENTAL PRECAUTIONS:

TOXIC to aquatic organisms and non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE. Avoid spray drift to susceptible plants and USE ONLY FOR RECOMMENDED PURPOSES AND AT RECOMMENDED RATES.

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.

STORAGE:

CANNOT be stored below freezing.

If stored for 1 year or longer, shake well before using.

Do not use or store in or around the home.

Keep in original container during storage.

Store this product away from food or feed.

DISPOSAL:

Recyclable Container Disposal (less than 23 liters):

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.

Returnable Container Disposal:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

Refillable Container Disposal:

For disposal, this empty 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.

Disposal of Unused, Unwanted Product:

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 cleanup of spills.

Disposal of Unused Spray Solution:

If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, away from water supplies, ditches, and irrigation canals.

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.

ADAMA GLUFOSINATE 150 SL

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EYE AND SKIN IRRITANT

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ADAMA GLUFOSINATE 150 SL

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GENERAL INFORMATION

Section 1: The Product

- ADAMA GLUFOSINATE 150 SL provides control of a broad spectrum of grassy and broadleaf weeds in Canola and Soybean varieties or hybrids that are specially developed to be tolerant to glufosinate ammonium.
- ADAMA GLUFOSINATE 150 SL is registered for use on glufosinate ammonium tolerant Canola and Soybean varieties or hybrids.
- ADAMA GLUFOSINATE 150 SL may also be applied to glufosinate ammonium tolerant lines or varieties grown for seed production.
- For hybrid seed production in canola, ADAMA GLUFOSINATE 150 SL may be used to remove segregating wild type plants within the female population. Two applications are required to do this. A third application may be necessary if it is determined that the segregating wild type plants are not fully removed from the field.
- Glufosinate ammonium tolerant Corn can be used as separator rows in hybrid Canola seed production, but must be destroyed and not used for food or feed.
- ADAMA GLUFOSINATE 150 SL may be used as a harvest aid (desiccant) on Alfalfa grown for seed.
- ADAMA GLUFOSINATE 150 SL will desiccate weeds that are present in the field at time of application when used as a harvest aid.
- ADAMA GLUFOSINATE 150 SL may also be used for primocane control in established Raspberries.

For use in Eastern Canada and British Columbia only:

- ADAMA GLUFOSINATE 150 SL may be used as a harvest aid (desiccant) in dry common beans.
- ADAMA GLUFOSINATE 150 SL will also desiccate weeds present in the field at application.
- ADAMA GLUFOSINATE 150 SL may also be used for annual and perennial weed control under fruit trees, grape vines and tree nuts.

When applied pre-emergent to the crop, but post-emergent to the weeds, ADAMA GLUFOSINATE 150 SL may also be used on stale seedbed in vegetables or at ground crack in potatoes.

SAFETY AND HANDLING

Section 2: Precautions and Protective Clothing and Equipment

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN. Harmful or fatal if absorbed through the skin. Harmful if swallowed. Causes eye irritation. DO NOT get in eyes, on skin or on clothing. Avoid breathing spray mist. Wash thoroughly after using and before eating, drinking or smoking.

If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262.

Protective Clothing and Equipment

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. Gloves and protective eyewear (goggles or face shield) are not required during application within a closed cab and/or cockpit.

Restricted-entry Restriction

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

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.

Section 3: First Aid and Toxicological Information

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

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.

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 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 treatment advice.

TOXICOLOGICAL INFORMATION:

Note to Physician: If this product is ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by charcoal and sodium sulfate administration.

Section 4: Environmental Precautions

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

Avoid spray drift to susceptible plants and USE ONLY FOR RECOMMENDED PURPOSES AND AT RECOMMENDED RATES.

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.

Section 5: Storage

CANNOT be stored below freezing.

If stored for 1 year or longer, shake well before using.

Do not use or store in or around the home.

Keep in original container during storage.

Store this product away from food or feed.

Section 6: Disposal

Recyclable Container Disposal (less than 23 litres):

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.

Returnable Container Disposal:

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

Refillable Container Disposal:

For disposal, this empty 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.

Disposal of Unused, Unwanted Product:

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 cleanup of spills.

Disposal of Unused Spray Solution:

If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, away from water supplies, ditches, and irrigation canals.

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.

POST EMERGENT USE

Section 7: Crops, Weeds, Timing and Rates

CANOLA – EASTERN CANADA AND COASTAL BC

- ADAMA GLUFOSINATE 150 SL is registered for aerial and ground application to glufosinate ammonium tolerant Canola varieties or hybrids.
- **To assure crop safety and optimal herbicide performance, only use ADAMA GLUFOSINATE 150 SL on glufosinate ammonium tolerant Canola grown from certified seed.**
- **Application of ADAMA GLUFOSINATE 150 SL to non-tolerant Canola varieties or hybrids or other non-tolerant crops will result in severe crop injury or death of the crop.**
- Apply ADAMA GLUFOSINATE 150 SL from the cotyledon stage up until, but prior to, the early bolting stage of Canola.
- Slight discoloration of the Canola may be visible after application. This effect is temporary and will not influence crop growth, maturity or yield.
- **For application to glufosinate ammonium and glyphosate tolerant canola varieties or hybrids** ADAMA GLUFOSINATE 150 SL should be applied in a sequential program with glyphosate for effective weed control. Tank mixing ADAMA GLUFOSINATE 150 SL with glyphosate may result in reduced control on certain weed species.
- ADAMA GLUFOSINATE 150 SL may also be applied to glufosinate ammonium tolerant Canola lines or varieties grown for seed production.
- **For hybrid seed production** - Two applications are required to remove the segregating wild type plants. The first application should occur when the Canola is in the 2-4 leaf stage, the second application when the Canola plants are in the 4-6 leaf stage. All applications of ADAMA GLUFOSINATE 150 SL for hybrid seed production should be made at 3.33 L/ha.
- Follow use instructions for canola and general instructions in this label.

CANOLA - PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA (INCLUDING THE PEACE RIVER REGION) ONLY

ADAMA GLUFOSINATE 150 SL is registered for aerial and ground application to glufosinate ammonium tolerant Canola varieties or hybrids grown in the Prairie Provinces and Interior of British Columbia (Including the Peace River region) only.

- **To assure crop safety and optimal herbicide performance, only use ADAMA GLUFOSINATE 150 SL on glufosinate ammonium tolerant Canola grown from certified seed.**
- **Application of ADAMA GLUFOSINATE 150 SL to non-tolerant Canola varieties or hybrids or other non-tolerant crops will result in severe crop injury or death of the crop.**
- Apply ADAMA GLUFOSINATE 150 SL from the cotyledon stage up until, but prior to, the early bolting stage of Canola.
- Slight discoloration of the Canola may be visible after application. This effect is temporary

and will not influence crop growth, maturity or yield.

- ADAMA GLUFOSINATE 150 SL may also be applied to glufosinate ammonium tolerant Canola lines or varieties grown for seed production.
- **For hybrid seed production** - Two applications are required to remove the segregating wild type plants. The first application should occur when the Canola is in the 2-4 leaf stage, the second application when the Canola plants are in the 4-6 leaf stage. All applications of ADAMA GLUFOSINATE 150 SL for hybrid seed production should be made at 3.33 L/ha.
- Follow use instructions for canola and general instructions in this label.

SOYBEAN

- ADAMA GLUFOSINATE 150 SL is registered for aerial and ground application to glufosinate ammonium tolerant Soybean varieties
- **Application of ADAMA GLUFOSINATE 150 SL to non-tolerant Soybean varieties or other non-tolerant crops will result in severe crop injury or death of the crop.**
- Apply ADAMA GLUFOSINATE 150 SL at 2 L to 3.33 L/ha from the cotyledon to the flowering stage of the crop.

SUSCEPTIBLE WEEDS: ADAMA GLUFOSINATE 150 SL has an effect on all weeds and crops except for those crops which are developed to be tolerant to applications of ADAMA GLUFOSINATE 150 SL. The following weeds are susceptible to application of ADAMA GLUFOSINATE 150 SL. Best control will be obtained when ADAMA GLUFOSINATE 150 SL is applied in the recommended leaf stages.

WEED	RECOMMENDED WEED LEAF STAGE								RATE
	1	2	3	4	5	6	7	8	
Cow Cockle	-----								1.33 L/ha
Green Foxtail	-----								Maximum 3 tillers

WEED	RECOMMENDED WEED LEAF STAGE								RATE
	1	2	3	4	5	6	7	8	
Barnyard Grass	-----								2 L/ha
Lady's-thumb	-----								
Lamb's-quarters	-----								
Russian Thistle	Up to 8 cm height								
Smartweed	-----								
Stinkweed	-----								
Volunteer Flax	Up to 6 cm height								
Wild Mustard	-----								

WEED	RECOMMENDED WEED LEAF STAGE								RATE
	1	2	3	4	5	6	7	8	
Canada Thistle ⁴	Up to 10 cm height								4 L/ha
Quackgrass ⁵	-----								

¹ Top Growth Suppression Only

² Suppression Only

³ Improved Top Growth Control

⁴ Better Top Growth Suppression

⁵ Season Long Control for Heavy Populations

SECOND APPLICATION – CANOLA

- A second application of ADAMA GLUFOSINATE 150 SL can be made to fields treated initially with up to 4.0 L/ha if new weed germination or growth is present.
- A first application of up to 4 L/ha may be followed by a second application of up to 3.33 L/ha,

OR

A first application of up to 3.33 L/ha may be followed by a second application of up to 4 L/ha.

- **Do not apply more than a total of 7.33 L/ha per year.**
- Apply when the new weed growth is in the correct leaf stage and up until, but prior to, the bolting stage of Canola.

THIRD APPLICATION - CANOLA (FOR HYBRID SEED PRODUCTION ONLY)

- Three applications of ADAMA GLUFOSINATE 150 SL, each at 3.33 L/ha, may be required for hybrid seed production. The third application must occur prior to bolting of the Canola crop.
- For best results, apply to emerged, young, actively growing weeds. Weeds that emerge after application will not be controlled.
- ADAMA GLUFOSINATE 150 SL will have an effect on weeds that are larger than the recommended leaf stage, however speed of activity and control may be reduced.

SECOND APPLICATION - SOYBEAN

- A second application of ADAMA GLUFOSINATE 150 SL can be made to Soybeans treated initially with up to 3.33 L/ha if new weed germination or growth is present. Apply when the new weed growth is in the correct leaf stage and up to the maximum leaf stage of the crop.
- Do not apply beyond the flowering stage of Soybeans.
- Do not apply more than a total of 6.67 L/ha in one season.

Use of Corn separator rows in hybrid Canola seed production

- ADAMA GLUFOSINATE 150 SL is registered for use on glufosinate ammonium tolerant Corn varieties or hybrids when used as separator rows in hybrid Canola seed production.
- Corn should be seeded at 20,000 – 30,000 plants/ha.
- Row spacing for glufosinate ammonium tolerant Corn should be 18-23 cm.

- Note: Corn must be destroyed and not used for food or feed.

Section 8: Primocane Control in Raspberry

Apply ADAMA GLUFOSINATE 150 SL in a minimum of 330 L/ha of water. Use a combination of spray pressures and nozzles, which will provide small droplet sizes and thorough coverage.

CROP	RECOMMENDATIONS	RATE
RASPBERRY (established Raspberries only)	ADAMA GLUFOSINATE 150 SL is recommended for the control of primocanes in established Raspberries. Apply when shoots are about 10-20 cm in height. DO NOT apply to immature or weak plantings. DO NOT APPLY BY AIR.	BROADCAST RATE 6.67 L/ha BANDED RATE Adjust the Broadcast application rate per hectare proportional to the width of the band applied. Use the formula to calculate the banded rate per hectare:
	FORMULA TO CALCULATE THE BANDED RATE PER HECTARE: Banded rate per hectare = (Band width ÷ Row width) x Broadcast Rate Example: 3.05 metre row spacing and 0.61 metre band width (0.61 M ÷ 3.05 M) x 6.67 L/ha = 1.33 L/ha band rate	

CAUTION: Avoid contact of the spray with desirable canes, plants and vegetation.

Section 9: Weed Control in Orchards and Vineyards - Eastern Canada and British Columbia only

Power and Tractor-Operated Sprayers:

Apply ADAMA GLUFOSINATE 150 SL in 330-1100 L/ha of water. Apply at a spray pressure of 275-310 kPa using nozzles (flat fan, hollow, or cone) which provide small droplets and thorough coverage.

Hand Held Pump-Type and Backpack Sprayers:

Apply ADAMA GLUFOSINATE 150 SL in a water volume of 10 litres per 100 M² to provide thorough coverage, but not to the point of runoff. Ensure that spray pressures are maintained during application.

CROP	RECOMMENDATIONS	RATE
• APPLES • APRICOTS • CHERRIES (sweet and sour) • Highbush BLUEBERRIES • GRAPES	ADAMA GLUFOSINATE 150 SL is recommended for the control of weeds in established orchards and vineyards. ADAMA GLUFOSINATE 150 SL may be applied with ground (boom) spray equipment, high volume, orchard	POWER AND/OR TRACTOR OPERATED SPRAYERS Apply ADAMA GLUFOSINATE 150 SL at 2.7-5 L/ha for the control of annual grass and broadleaf weeds. Use as a directed spray around the base of the trees

• PEARS • NECTARINES • PLUMS • PEACHES • MEMBERS OF CROP GROUP 14-11: TREE NUTS, INCLUDING - ALMOND, - BEECH NUT, - BUTTERNUT, - CHESTNUT, - FILBERT (HAZELNUT), - HICKORY NUT, - PECAN, - WALNUT, - CHINQUAPIN NUT, - BUR OAK NUT, - GINGKO NUT, - HEARTNUT, - JAPANESE HORSE CHESTNUT, - PINE NUT	spray guns or hand-held pump-type and backpack sprayers. DO NOT APPLY BY AIR. For the specific weeds controlled by ADAMA GLUFOSINATE 150 SL, refer to Section 11. Repeat treatments may be necessary to control new germination of annual weeds. Do not make more than 2 applications per year. Do not apply more than 6.7 L/ha total product in one season. Avoid contact of ADAMA GLUFOSINATE 150 SL solution, spray, drift or mist with green bark, stems, or foliage, as injury may occur to trees, vines or canes. Only trunks with callused, mature brown bark should be sprayed unless protected from spray contact by nonpourous wraps, tree/bark guards, grow tubes or waxed containers. Contact of ADAMA GLUFOSINATE 150 SL with parts of trees, vines or canes other than mature brown bark can result in serious damage. For control of weeds present and residual control of annual grass and broadleaf weeds ADAMA GLUFOSINATE 150 SL may be tank mixed with Princep® Nine-T® (See Section 12 for tank mix instructions).	or vines. HAND HELD PUMP TYPE AND BACKPACK SPRAYERS Mix ADAMA GLUFOSINATE 150 SL at 27-50 mL of product per 10 litres of spray solution for the control of annual grass and broadleaf weeds. Use as a directed spray around the base of the trees or vines.
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Section 10: Weed Control in Vegetables and Field Crops - Eastern Canada and British Columbia only

ADAMA GLUFOSINATE 150 SL will control weeds that are contacted, and will have no effect on the crop if it has not yet emerged.

The seedbed should be prepared in sufficient time prior to seeding the crop, to allow weeds to emerge. The crop is seeded with a minimum of disturbance to the (stale) seedbed. Application of ADAMA GLUFOSINATE 150 SL may take place any time after initial cultivation of the seedbed up until emergence of the crop.

Apply ADAMA GLUFOSINATE 150 SL in a minimum of 110-330 L/ha of water. Apply at a spray pressure of 275-310 kPa using nozzles (flat fan, hollow, or cone) which will provide small droplets and thorough coverage.

CROP	RECOMMENDATIONS	RATE
ASPARAGUS (stale seedbed, direct seeded)	ADAMA GLUFOSINATE 150 SL may be applied prior to emergence of Asparagus as a stale seedbed technique for annual grass and broadleaf weed control.	Apply ADAMA GLUFOSINATE 150 SL at 2.7-5 L/ha depending on the weeds present at application. DO NOT APPLY BY AIR.
ASPARAGUS (established beds after harvest)	ADAMA GLUFOSINATE 150 SL may be applied after spears have been harvested.	
CARROTS, LETTUCE, ONIONS (stale seedbed)	ADAMA GLUFOSINATE 150 SL may be applied as a stale seedbed technique for annual grass and broadleaf weed control.	
POTATOES (ground crack)	Apply ADAMA GLUFOSINATE 150 SL at no later than ground crack to control annual grass and broadleaf weeds. For residual control of annual weeds, ADAMA GLUFOSINATE 150 SL may be tank mixed with Lexone DF Herbicide Dispersible Granules®. See Section 12 for tank mix instructions.	

Section 11: Weed Control Information – Eastern Canada and British Columbia only

2.7 – 4 L/ha:

- Common Chickweed, Green Foxtail, Lamb's-quarters, Stinkweed, Wild Mustard, Redroot Pigweed (use 4 L/ha).

4 – 5 L/ha:

- Dandelion, Oak-leaved Goosefoot, Wild Buckwheat

Rate Range:

Where a rate range is given use the higher rate when:

1. the crop or weed growth is dense.
2. the weeds are large and/or mature.
3. the environmental conditions are cool and dry.

Timing:

For best results, apply to emerged, young actively growing weeds. Weeds that emerge after application will not be controlled.

Apply before weeds reach a height of 30 cm.

ADAMA GLUFOSINATE 150 SL will control weeds at all leaf stages, although coverage is more difficult when weeds are large or mature.

Weeds will be best controlled when environmental conditions are favourable (warm temperatures, good moisture conditions, high humidity).

Section 12: Tank Mixes

- 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.
- For enhanced activity ADAMA GLUFOSINATE 150 SL may be tank mixed with the following products:

CANOLA

TANK MIX PRODUCT	RATE	DIRECTIONS
Centurion Emulsifiable Concentrate Post-Emergence Herbicide® or Select Emulsifiable Concentrate Post-Emergence Herbicide®	63 mL/ha	For control of Volunteer Barley and Wild Oats, apply ADAMA GLUFOSINATE 150 SL at a rate of 2.67 – 4.0 L/ha plus Centurion® or Select® at 63 mL/ha with adjuvant as recommended on the Centurion or Select label. Apply when the weeds are in the 1-4 leaf stage with a maximum of 2 tillers.
Facet® L + Merge®	0.28 L/ha + 0.5 - 1.0 L/ha	For enhanced and more consistent control of cleavers, apply ADAMA GLUFOSINATE 150 SL at a rate of 3.33 L/ha plus Facet® L at 0.28 L/ha. Apply in 100 L/ha of water with Merge® Adjuvant at a rate of 0.5 to 1 L/ha. Application should be made from the 2 to 6 true leaf stage of the canola crop.

Facet® L + Centurion Emulsifiable Concentrate Post-Emergence Herbicide® + Amigo® or Merge®	0.28 L/ha + 63 mL/ha + 0.5 L/ha	For enhanced and more consistent control of cleavers and annual grasses, apply ADAMA GLUFOSINATE 150 SL at a rate of 3.33 L/ha plus Facet® L at 0.28 L/ha plus Centurion® at 63 mL/ha. Apply in 100 L/ha of water with Amigo® or Merge® Adjuvant at 0.5 L/ha. Application should be made from the 2 to 6 true leaf stage of the canola crop.
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APPLES AND PEARS (Bearing and Non-bearing Trees Established One Year or More) - Eastern Canada and British Columbia only

USING POWER AND/OR TRACTOR OPERATED SPRAYERS:

Tank Product	Mix	Application Rate	Directions
Princep T®	Nine-T®	2-5 Kg/ha	Consult the Princep Nine-T® label for further instructions regarding directions for use, restrictions, precautions and weeds controlled.

USING HAND HELD PUMP-TYPE AND BACKPACK SPRAYERS:

Tank Product	Mix	Application Rate	Directions
Princep T®	Nine-T®	25-50 g/10 L	Consult the Princep Nine-T® label for further instructions regarding directions for use, restrictions, precautions and weeds controlled.

GRAPES (Established Three Years or More) – Eastern Canada Only

USING POWER AND/OR TRACTOR OPERATED SPRAYERS:

Tank Product	Mix	Application Rate	Directions
Princep T®	Nine-T®	4-5 Kg/ha	Consult the Princep Nine-T® label for further instructions regarding directions for use, restrictions, precautions and weeds controlled.

USING HAND HELD PUMP-TYPE AND BACKPACK SPRAYERS:

Tank Product	Mix	Application Rate	Directions
Princep T®	Nine-T®	40-50 g/10 L	Consult the Princep Nine-T® label for further instructions regarding directions for use, restrictions, precautions and weeds controlled.

POTATOES

Eastern Canada or Coastal British Columbia:

Tank Product	Mix	Application Rate	Directions
Lexone® Herbicide Dispersible Granules	DF	750 g/ha	Consult the Lexone® DF Herbicide Dispersible Granules label for further instructions regarding directions for use, restrictions, precautions and weeds controlled. DO NOT APPLY BY AIR.

Interior British Columbia:

Tank Product	Mix	Application Rate	Directions
Lexone® Herbicide Dispersible Granules	DF	350 g/ha	Consult the Lexone® DF Herbicide Dispersible Granules label for further instructions regarding directions for use, restrictions, precautions and weeds controlled. DO NOT APPLY BY AIR.

DESICCATION USE

Section 13: Crops, Instructions and Rate

- ADAMA GLUFOSINATE 150 SL may be applied for desiccation to Alfalfa (grown for seed) and Dry Common Beans.
- ADAMA GLUFOSINATE 150 SL will also desiccate weeds, which are present in the field at time of application (Wild Buckwheat may not be completely desiccated).
- Desiccation of crops and weeds will be best when environmental conditions are favourable (warm temperatures, good moisture conditions, high humidity).

CROP	INSTRUCTIONS	RATE
ALFALFA (grown for seed)	Apply ADAMA GLUFOSINATE 150 SL at 50-75% pod turn (brown) stage. Do NOT apply more than once per year. Ground or aerial application.	2.7 L/ha

DRY COMMON BEANS (do not apply to Dry Common Beans grown for seed) Eastern Canada and British Columbia only	Apply when approximately 50-75% of the bean pods have naturally changed colour from green to yellow or brown (pod turn). The crop may be straight combined when ready, allowing a minimum of 9 days after application. ADAMA GLUFOSINATE 150 SL, when applied to Dry Common Beans at the appropriate stage, will uniformly dry down the crop and weeds, facilitating harvest and preventing bean staining. Any secondary growth will be terminated, and moisture levels in the seed will be reduced, allowing for earlier harvest.	2.5 – 3 L/ha ¹
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¹ Use the higher rate when the crop canopy is dense and/or there are high populations of weeds present at application. DO NOT APPLY BY AIR.

GENERAL INSTRUCTIONS

Section 14: Herbicide Resistance Management Recommendations

For resistance management, ADAMA GLUFOSINATE 150 SL is a Group 10 herbicide. Any weed population may contain or develop plants naturally resistant to ADAMA GLUFOSINATE 150 SL and other Group 10 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 ADAMA GLUFOSINATE 150 SL or other Group 10 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.

Section 15: Application Instructions and Precautions

APPLICATION INSTRUCTIONS:

- The speed of action of ADAMA GLUFOSINATE 150 SL is influenced by environmental factors. At cool temperatures (below 10° C), poor moisture and low humidity, the speed of action may be reduced. Generally, visual symptoms appear 2-4 days after application.
- For best results, apply to emerged, young, actively growing weeds. Weeds that emerge after application will not be controlled.
- ADAMA GLUFOSINATE 150 SL will have an effect on weeds that are larger than the recommended leaf stage; however speed of activity and control may be reduced.
- ADAMA GLUFOSINATE 150 SL works primarily as a contact herbicide. Thorough coverage of the weeds to be controlled, or the crop to be desiccated, is essential.
- When a rate range is given the higher rate should be utilized:
 1. when the weed or crop growth is dense;
 2. when the weeds are large and/or mature - i.e., advanced leaf stages and plant height;
 3. when the environmental conditions are cool and dry.
 Refer to Section 7 for weeds controlled.

Ground Application Instructions:

- Ensure that all circuits (pipes, booms etc.) have the correct ADAMA GLUFOSINATE 150 SL / water concentration before application is started.
- Apply ADAMA GLUFOSINATE 150 SL in a minimum of 110 L/ha of water, at a pressure of 275 kPa and at a ground speed of 6-8 kph. If check valves are used, apply at 310 kpa. The use of 80° or 110° flat fan nozzles is highly recommended for optimum spray coverage and canopy penetration.
- Application of the spray at a 45° angle forward will result in better spray coverage. Refer to Sections 7, 8 (Post-emergent) and 10 (Desiccation) for the correct rate and timing of application.
- **For desiccation uses only**, where the crop canopy is dense or weed growth is heavy, achieve better spray coverage with higher spray volumes. Under these conditions, apply in a minimum of 170-220 L/ha of water. Refer to Aerial Application for appropriate aerial water volumes.

Aerial Application Instructions:

- 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 rates 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.
- When applying ADAMA GLUFOSINATE 150 SL by aircraft, uniform spray coverage is essential. Applicators are required to use the correct combination of spray nozzle tips, nozzle placement and spray pressures which will provide a coarse droplet size distribution with a volume mean diameter greater than 350 microns. Do not use raindrop nozzles. To avoid streaked, uneven or overlapped application, use appropriate marking devices.
- **Post-emergent Use in Glufosinate Ammonium Tolerant Canola and Soybean Water Volume:** Apply ADAMA GLUFOSINATE 150 SL in a minimum of 55 L/ha of water only.
- **Desiccation Use Only Water Volume Range:** If the crop canopy is dense or weed growth is heavy, achieve better spray coverage with higher spray volumes. Under these conditions, if using aerial application, apply ADAMA GLUFOSINATE 150 SL in a minimum of 33-55 L/ha of water.

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.

APPLICATION PRECAUTIONS

- Weed control may be reduced when heavy dew, fog or mist is present at the time of application.
- Uniform, thorough spray coverage is important to achieve consistent weed control.
- Crop injury may result if ADAMA GLUFOSINATE 150 SL is applied to a crop stressed by severe weather conditions, frost, drought, water-saturated soil, low fertility, disease or insect damage.
- ADAMA GLUFOSINATE 150 SL is a non-selective herbicide and has the potential to desiccate, defoliate or kill all green plants. Avoid contact with other desirable plants or crops by direct application or from spray drifts as severe damage may occur.
- **Application of ADAMA GLUFOSINATE 150 SL to non-tolerant Canola or Soybean varieties, hybrids or other non-tolerant crops will result in severe crop injury or death of the crops.**
- **To assure crop safety and optimal herbicide performance, only use ADAMA GLUFOSINATE 150 SL on glufosinate ammonium tolerant Canola or Soybean grown from certified seed.**

Plant-back Intervals:

- 70 days for buckwheat, barley, millet, oats, rye, sorghum, triticale.
- 120 days for all other crops except field corn, canola and soybeans, dry common beans (not grown for seed), alfalfa, carrot, lettuce, onion and potato.

Ground Application Precautions:

- 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) medium classification. Boom height must be 60 cm or less above the crop or ground.
- Do NOT apply if winds exceed 16 kph when using open boom sprayers for ground application.
- Do NOT apply if winds exceed 25 kph when using hooded sprayer for ground application.
- Do not use flood jet nozzles, controlled droplet application equipment or air-assisted spray equipment.

Aerial Application Precautions:

- 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.

Product Specific Precautions:

- Read and understand the entire label before opening this product. If you have questions, call ADAMA Agricultural Solutions Canada Ltd. at 1-855-264-6262 or obtain technical advice from the distributor or your provincial agricultural representative.

Aerial Application Operator Precautions:

- DO NOT allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.
- It is desirable that the pilot have communication capabilities at each treatment site at the time of application.
- The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. 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.

Rainfast Period:

- **If rainfall occurs within 4 hours of application, effectiveness may be reduced.**

Section 16: Spray Buffer Zones

Spot treatments using hand-held equipment do not require a spray buffer zone.

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

Method of Application	Crop	Spray Buffer Zones (metres) Required for the Protection of:		
		Freshwater Habitat of Depths:		Terrestrial Habitat
		Less than 1 m	Greater than 1 m	
Field Sprayer	All labelled crops	1	0	1
Aerial	Alfalfa, soybean (fixed wing and rotary)	1	0	20
	Canola	Fixed-wing	0	35
		Rotary-wing	0	30

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.

Section 17: Mixing Instructions

Mixing Instructions

- ADAMA GLUFOSINATE 150 SL must be applied with properly calibrated, clean equipment.
- ADAMA GLUFOSINATE 150 SL is specially formulated to mix readily in water.
- Prior to adding ADAMA GLUFOSINATE 150 SL to the spray tank, ensure that the spray tank is thoroughly clean (see Section 18, “Sprayer Cleanup”).
 1. Fill the tank three-quarters full with clean water.
 2. Add the correct amount of ADAMA GLUFOSINATE 150 SL.
 3. Add the remaining amount of water, begin agitation, and spray out immediately.

Section 18: Sprayer Cleanup

- Before and after using ADAMA GLUFOSINATE 150 SL always complete a thorough cleaning of the spray tank, lines, and filter. Spray equipment should be thoroughly rinsed using a strong detergent solution.

Section 19: Livestock Feeding and Preharvest Intervals

LIVESTOCK FEEDING:

Canola:

- Grain and meal from treated crop can be fed to livestock.
- Do not graze the treated crop or cut for hay; sufficient data are not available to support such use.

Corn (used as separator rows in Hybrid Canola Seed Production):

- Do not feed treated crop to livestock; sufficient data are not available to support such use.

Soybean:

- Do not graze the treated fields within 20 days of application.

PRE-HARVEST INTERVALS (PHI)

Canola:

- When ADAMA GLUFOSINATE 150 SL is tank mixed with Facet® L, Centurion Emulsifiable Concentrate Post-Emergence Herbicide ® or Select Emulsifiable Concentrate Post-Emergence Herbicide®, observe a PHI of 60 days from the date of treatment.

Soybean:

- Do not apply within 70 days of harvesting Soybean seed.

Apples	40 days
Apricots	14 days
Cherries (sweet and sour)	14 days
Dry Common Beans	9 days
Grapes	40 days
Highbush Blueberries	14 days
Nectarines	14 days
Peaches	14 days
Pears	40 days
Plums	14 days
Potatoes	9 days
Tree Nuts	14 days

Section 20: Notices

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.

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