GROUP 2 HERBICIDE

# **SOLO® ADV**

**HERBICIDE** 

SOLUTION

COMMERCIAL (AGRICULTURAL)

FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND PEACE RIVER AREA OF BRITISH COLUMBIA ONLY

REGISTRATION NO. 32066 PEST CONTROL PRODUCTS ACT

CAUTION – SKIN IRRITANT READ THE LABEL AND BOOKLET BEFORE USING

KEEP OUT OF REACH OF CHILDREN

# IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY INVOLVING THIS PRODUCT, CALL DAY OR NIGHT 1-800-454-2673

NET CONTENTS: 1 L - 1000 L, Bulk

BASF Canada Inc. 100 Milverton Drive, 5<sup>th</sup> Floor Mississauga, ON L5R 4H1 1-877-371-2273

SOLO is a registered trademark of BASF SE, used with permission by BASF Canada Inc.

#### **PRECAUTIONS**

# KEEP OUT OF REACH OF CHILDREN.

DO NOT take internally. Harmful if swallowed.

May irritate skin. Avoid contact with skin.

Avoid breathing spray and mist. Use with adequate ventilation.

Wash thoroughly after handling and before eating, drinking or smoking.

Wear a long-sleeved shirt and long pants during all activities, and wear chemical-resistant gloves during mixing/loading, clean-up and repair activities.

If clothing becomes contaminated, remove immediately and wash separately from household laundry before reuse.

Do not enter or allow workers entry into treated areas during the restricted entry interval (REI) of 12 hours.

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

#### **FIRST AID**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

# **TOXICOLOGICAL INFORMATION**

Treat symptomatically.

#### **ENVIRONMENTAL HAZARDS**

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

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

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.

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.

# **STORAGE**

- 1. Shake well before use.
- 2. Store in original, tightly-closed container.
- 3. Do not ship or store the product near food, feed, seed or fertilizers.
- 4. Store in a cool, dry, locked, well-ventilated area without floor drain.
- 5. Herbicides should be shipped or stored separately from other pesticides to avoid cross-contamination.
- 6. Protect from freezing. **SOLO ADV** will freeze at -5°C. If this product has been stored where freezing temperatures have occurred, thaw the product completely at room temperature, then shake well before use.

#### DISPOSAL

#### **Recyclable Containers**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

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

#### **Returnable-Refillable Containers**

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.

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

#### **NOTICE TO USER**

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#### **GENERAL INFORMATION**

**SOLO ADV** is a selective herbicide that can be applied as an early post-emergence treatment in **Clearfield®** Lentils¹ (lentil varieties with the **Clearfield** trait), **Clearfield** Sunflowers¹ (sunflower varieties with the **Clearfield** trait) and soybeans.

When **SOLO ADV** is applied early post-emergence, absorption may occur through both the roots and foliage. Susceptible weeds stop growing and eventually die.

Use of **SOLO ADV** on sunflower or lentil varieties not designated with the **Clearfield** trait will cause severe injury.

#### **DIRECTIONS FOR USE**

**DO NOT** apply more than once per year.

# **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 by air.

#### **Buffer Zones**

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).

Method of Application	Crop	Buffer Zones (metres) Required for the Protection of Terrestrial Habitat
Field sprayer	All crops	1

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 spray 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 Pesticides and Pest Management portion of the Health Canada website.

# **Registered Crops and Application Timing**

**SOLO ADV** may be applied as an early post-emergence treatment to the following crops. Applications should be made at the appropriate crop staging as indicated below and after weeds have emerged. To control broadleaf weeds, apply **SOLO ADV** from the cotyledon to the 4-leaf stage. To control grasses, apply **SOLO ADV** from the 1 to 4-true leaf stage up until early tillering.

Сгор	Leaf Stage	
Clearfield Lentils <sup>1</sup>	1-9 node stage	
Clearfield Sunflowers <sup>1</sup>	2 to 8 true leaf stage	
Soybeans	cotyledon to 4-leaf stage	

# **Application Rates and Weeds Controlled**

Apply **SOLO ADV** in a water volume of 100 L/ha for control of broadleaf and grass weeds as indicated below. Initial transient crop yellowing may be observed after application but this is usually outgrown and should not affect crop yield.

SOLO ADV at 0.8 L/ha will control:	
Barnyard grass Cleavers* Cow cockle Green foxtail Green smartweed Japanese brome grass* Kochia* Lamb's-quarters Persian darnel Redroot pigweed	Volunteer barley Volunteer canary seed Volunteer canola (non-Clearfield tolerant canola only) Volunteer durum wheat Volunteer spring wheat (non-Clearfield tolerant wheat) Volunteer tame oats Wild buckwheat* Wild mustard
Round-leaved mallow* Russian thistle Shepherd's purse Stinkweed	Wild oats Yellow foxtail

<sup>\* =</sup> suppression only

# **Tank Mix Options**

To provide enhanced weed control, **SOLO ADV** may be tank-mixed with the following tank-mix partners. Read and follow the label of tank mix partner products regarding specific precautions, restrictions and application information.

# **SOLO ADV + POAST® ULTRA Liquid Emulsifiable Herbicide**

**SOLO ADV** may be tank-mixed with POAST ULTRA Liquid Emulsifiable Herbicide and applied to **Clearfield** Lentils<sup>1</sup> (lentil varieties with the **Clearfield** trait), **Clearfield** Sunflowers<sup>1</sup> (sunflower varieties with the **Clearfield** trait) and soybeans.

Apply to broadleaf weeds from the cotyledon to 4-leaf stage and to grassy weeds from 1-6 true leaf or up to 2 tillers. Refer to the POAST ULTRA Liquid Emulsifiable Herbicide label for additional recommendations, precautions and restrictions not specified on this label.

Rate	0.8 L/ha <b>SOLO ADV</b> + POAST ULTRA Liquid Emulsifiable Herbicide at 0.32 to 0.47 L/ha	
Water Volume	100 L/ha	
Weeds Controlled	This tank-mix combination will provide control of the following weeds in addition to those listed in the Application Rates and Weeds Controlled section of this label. Apply POAST ULTRA Liquid Emulsifiable Herbicide at the 0.47 L/ha rate when weed densities are high and overlapping, when staging is late, or when weeds are under stress and not growing as actively due to moisture stress or temperature stress.	
	Crabgrass (large) Fall panicum Green foxtail <sup>1</sup> (including Group 1 and 2 resistant) Proso millet Quack grass (suppression, 2 to 5 leaf) <sup>2</sup> Volunteer corn Volunteer wheat (including Clearfield) Wild oats <sup>1</sup> (including Group 1 and 2 resistant) Witchgrass Yellow foxtail	

<sup>&</sup>lt;sup>1</sup> The tank mix of **SOLO ADV** + POAST ULTRA Liquid Emulsifiable Herbicide will not control weed biotypes that are multiple-resistant to both Group 1 and Group 2 Herbicides.

<sup>&</sup>lt;sup>2</sup> Apply 0.38 – 0.47 L/ha of POAST ULTRA Liquid Emulsifiable Herbicide.

# NOTE TO USER - READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the uses described on this Label were developed by persons other than BASF Canada and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. BASF Canada itself makes no representation or warranty with respect to performance (efficacy) and crop tolerance (phytotoxicity) claims for this product when used on the crops listed on this Label.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerances arising, and agree to hold BASF Canada harmless from any claims based on efficacy or phytotoxicity in connection with the uses described on this Label.

# Imidazolinone-tolerant Chickpeas (chickpea varieties designated as imidazolinone-tolerant)

Apply only to imidazolinone-tolerant chickpeas. Use of SOLO ADV on chickpea varieties not designated with the imidazolinone trait will cause severe injury. Growers should consult the seed guide and supplier at point of purchase for tolerant varieties.

Applications should be made at the appropriate crop staging as indicated below and after weeds have emerged. To control broadleaf weeds, apply **SOLO ADV** from the cotyledon to the 4-leaf stage. To control grasses, apply **SOLO ADV** from the 1 to 4-true leaf stage up until early tillering.

Rate	0.8 L/ha <b>SOLO ADV</b>
Water Volume	100 L/ha
Application Timing	Early post-emergence, 1 – 6 node of chickpea
Weeds Controlled	Labelled weeds as listed in the Application Rates and Weeds Controlled section of this label.
PHI	60 days

# PRE-HARVEST AND GRAZING INTERVALS (PHI)

The following pre-harvest and grazing intervals should be observed for respective crops.

Сгор	PHI (days)
Clearfield lentils <sup>1</sup>	60
Clearfield sunflowers <sup>1</sup>	70
Soybeans	60

DO NOT graze the treated **Clearfield** Lentils<sup>1</sup> or soybeans or cut for hay within 20 days of application.

DO NOT graze treated sunflower plants or cut for straw; sufficient data are not available to support such use.

#### **RESTRICTIONS AND LIMITATIONS**

- DO NOT apply when weather conditions may cause spray drift from treated fields to adjacent crops. Clean sprayer thoroughly after use to avoid damage to the next crop sprayed.
- 2. **DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.
- 3. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- 4. **DO NOT** apply to any crops that have been subjected to stress from conditions such as frost, hail damage, flooding, drought, hot, humid weather, widely fluctuating temperature conditions, prolonged cold weather or injury from prior herbicide applications, as crop injury may result.
- Apply only when the potential for drift to areas of human habitation or 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.
- 6. As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.
- 7. 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 BASF at 1-877-371-2273 or www.agsolutions.ca 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 BASF.

# **SPRAYING INSTRUCTIONS**

Select proper nozzle to avoid spraying fine mist. For best results, use sprayers equipped with flat fan or similar nozzles to ensure coverage. Apply in a spray volume of 100 L/ha and at a pressure of 275 kPa. Better coverage of the product results in enhanced control of weeds.

#### MIXING INSTRUCTIONS

- 1. Shake well before use. When applying **SOLO ADV**, always start with a clean sprayer. Refer to previously applied product labels for specific cleaning instructions.
- 2. Fill the clean spray tank with half to three-quarters of the required amount of clean water and start agitation system. Agitation should be running during the entire mixing procedure.
- 3. Add the correct amount of **SOLO ADV** and continue to agitate.
- 4. If required, add the required amount of POAST ULTRA Liquid Emulsifiable Herbicide while agitating the spray solution.
- 5. Continue agitation while filling the spray tank with the remaining amount of water.
- 6. Maintain continuous and constant agitation throughout application until spraying is complete.
- 7. Upon completion of spraying **SOLO ADV**, thoroughly flush tank, boom, hoses and in-line and nozzle screens with clean water to avoid possible injury to other crops.

#### **FOLLOW CROPPING**

Winter wheat can be planted 3 months after treatment (3 MAT) as a rotational crop.

Initial crop injury to non-**Clearfield** canola may be observed. Avoid spray overlap as yield reduction may result. The following crops may be grown safely the year following an application:

Canary seed

Field corn

Field peas

Clearfield Canola<sup>1</sup>

Non-Clearfield canola

Lentils

Spring wheat

**Durum wheat** 

Spring barley

Soybeans

Sunflower

Tame oats

Flax

Chickpeas

Clearfield Sunflowers<sup>1</sup>

The following crop may be grown safely two years following an application:

Mustard (condiment type only)

There are insufficient data for other follow crops. Conduct a field bioassay (a test strip grown to maturity) the year before growing any crop other than those listed above.

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, **SOLO ADV** herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **SOLO ADV** herbicide and other Group 2 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 SOLO ADV herbicide or other Group 2 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 BASF at 1-877-371-2273 or at www.agsolutions.ca.

**Clearfield** is a registered trademark of BASF Agrochemical Products B.V. and POAST is a registered trademark of BASF SE, all used with permission by BASF Canada Inc.

Methods of growing plants which are resistant to certain acetohydroxyacid synthase (AHAS) herbicides are protected by Canadian Patent No. 1341465. Other applicable patents include Canadian Patent Application No. 2447445. The use of this product in the practice of patented methods could constitute patent infringement. Further information can be obtained by contacting BASF Canada at 1-877-371-2273.