**BASE** 

GROUP 4 HERBICIDE

# **SALVO®**

# **2,4-D ESTER 700**

# **EMULSIFIABLE CONCENTRATE**

# HERBICIDE COMMERCIAL



**POISON** 

# POTENTIAL SKIN SENSITIZER

WARNING - SKIN IRRITANT

# KEEP OUT OF REACH OF CHILDREN

# READ THE LABEL AND THE BOOKLET BEFORE USING

**ACTIVE INGREDIENT:** 2,4-D, present as 2-ethyl hexyl ester...660 g a.e./L

REGISTRATION NO. 27818 PEST CONTROL PRODUCTS ACT

IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT, 1-800-561-8273

LOVELAND PRODUCTS CANADA INC. 789 DONNYBROOK DRIVE DORCHESTER, ONTARIO NOL 1G5 1-800-328-4678

NET CONTENTS: 10, 115, 205, 1000 L

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NET CONTENTS: 10, 115, 205, 1000 L

## **PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN. Fatal or poisonous if swallowed. Potential skin sensitizer. Causes skin irritation. DO NOT get on skin. Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes IMMEDIATELY. After use, wash hands and other exposed skin. Avoid breathing spray mist.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at www.croplife.ca.

For product and use information, contact Loveland Products Canada Inc. 1-800-328-4678.

# **ENVIRONMENTAL HAZARDS:**

Avoid contamination of ponds, streams, rivers and other water sources.

This product contains a petroleum distillate, which is moderately to highly toxic to aquatic organisms.

DO NOT apply this product directly to freshwater habitats such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands, estuaries or marine habitats.

DO NOT contaminate irrigation/drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Toxic to broadleaf terrestrial plants. This product may harm other broadleaf plants in the vicinity of the treatment area. If applying this product using a mechanically pressurized handgun, do not directly spray or allow the spray to drift onto ornamentals or gardens.

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

Do not spray exposed roots of trees and ornamentals.

## Leaching:

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. To minimize possible contamination of groundwater, the use of spot treatment application is recommended.

## Run-off:

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

Avoid application of this product when heavy rain is forecast.

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

To prevent runoff from domestic uses avoid spraying on driveways, sidewalks or other hard surfaces. Do not irrigate within 24 hours after application.

# PROTECTIVE CLOTHING AND EQUIPMENT:

Handling the concentrate (mixing and loading): Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Rinse gloves before removal.

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 5 kg a.e. (7.58 L) per day. DO NOT handle more than 8 kg a.e. (12.1 L) per day.

When handling more than 265 kg a.e. per day (402 L), workers must also use a closed system.

Handling the dilute spray solution (during application or repairing or cleaning equipment): Wear a long-sleeved shirt, long pants, coveralls, chemical-resistant gloves, socks and shoes. Rinse gloves before removal.

**Ground Application:** Applicators (mixers/loaders) must wear coveralls over a long-sleeved shirt, long pants and chemical-resistant gloves.

Gloves are not required during application when applicator is in an enclosed tractor or an enclosed airplane cockpit.

**Aerial Application:** Applicators must wear coveralls over a long-sleeved shirt and long pants. Chemical-resistant gloves must also be worn during clean-up and repair activities. No human flaggers are permitted.

# **OPERATOR USE PRECAUTIONS:**

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
- Wash hands before eating, drinking, using tobacco or using the toilet.
- If herbicide penetrates clothing remove immediately; then wash thoroughly and put on clean clothing. Throw away clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- After using this product, remove clothing and launder separately and promptly, and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's instructions for cleaning personal protective clothing and equipment. If no such instructions for washables are provided, use detergent and hot water. Keep and wash personal protective equipment separate from household laundry.

• After work, remove all clothing and shower using soap and water.

## FIRST AID:

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 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 SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by poison control centre or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

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.

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

# **TOXICOLOGICAL INFORMATION:**

This product may cause mild irritation to the eyes. Overexposure to 2, 4-D may cause coughing, burning, dizziness or temporary loss of muscle coordination. Other possible effects of overexposure include fatigue, muscle weakness or nausea. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. Treat symptomatically.

# **STORAGE CONDITIONS:**

Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. If this product is exposed to temperatures below  $-20^{\circ}$  C, it should be warmed to at least  $5.0^{\circ}$  C and mixed

thoroughly before using SHAKE WELL BEFORE USING.

# **DISPOSAL/DECONTAMINATION:**

# 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:

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# For Returnable-Refillable Containers:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

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

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 5 kg a.e. per day (sufficient to treat approximately **7.58 L/day** at the rate of **0.66 kg a.e./L**).

DO NOT handle more than 8 kg a.e. per day (sufficient to treat approximately 12.1 L/day at the rate of 0.66 kg a.e./L).

**Field sprayer application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

**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) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies that minimize off-site drift, including meteorological conditions (e.g. wind direction, low wind speed) and spray equipment (e.g. coarse droplet sizes, minimizing height above canopy), should be used. Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats. For the use of the herbicide in site preparation and conifer release in forestry, terrestrial buffer zones are not required.

# **RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, SALVO 2, 4-D Ester 700 Liquid Herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to SALVO 2, 4-D Ester 700 Liquid Herbicide and other Group 4 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

# To delay herbicide resistance:

- Where possible, rotate the use of SALVO 2, 4-D Ester 700 Liquid Herbicide or other Group 4 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 treated 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 Loveland Products Canada Inc., 1-800-328-4678 or at www.lovelandproducts.ca.

# **BUFFER ZONES:**

Use of the following spray methods or equipment DO NOT require a buffer zone: mechanically pressurized handgun or backpack sprayer and spot treatment.

The buffer zones specified in the tables 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), and estuarine/marine habitats.

	Сгор			<b>Buffer Zones (metres) Required for the Protection of:</b>				
Method of				Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		_
Application				Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	Terrestrial Habitat
	Golf courses, turf			1	0	1	0	1
Field Sprayer*	Field crops (cereal grains, corn, grain and forage sorghum)			1	1	1	1	1
	Grasslands, fallowland and crop stubble, pastures, rangelands, non-cropland (including rights-of-way** and brush control)			1	1	1	1	2
	Field crops (cereal grains, corn, grain and forage sorghum)  Grasslands, fallowland and crop stubble, pastures and rangelands		Fixed wing	10	0	1	0	45
			Rotary wing	10	0	1	0	40
			Fixed wing	15	0	1	0	60
			Rotary wing	15	0	1	0	50
	Non- cropland (including rights-of- way**and brush control)	3.4 L/ha (2.24 kg a.e./ha)	Fixed wing	70	0	1	0	150
			Rotary wing	35	0	1	0	80
		6.8 L/ha (4.48 kg a.e. /ha)	Fixed wing	125	1	15	1	225
Aerial			Rotary wing	50	1	5	1	100
	Forestry (site preparat- ion)	2.4 kg a.e./ha	Fixed wing	175	0	1	1	NR
			Rotary wing	95	0	1	0	NR
		3.1 kg a.e./ha	Fixed wing	225	1	1	0	NR
			Rotary wing	125	1	1	0	NR
		4.48 kg a.e./ha	Fixed wing	350	1	20	1	NR
			Rotary wing	175	1	10	1	NR

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

<sup>\*\*</sup> For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required.

NR - buffer zones not required.

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

# **GENERAL USE PRECAUTIONS:**

SALVO 2, 4-D Ester 700 Liquid Herbicide may cause damage to susceptible crop, ornamental, and other plants, even in minute quantities.

Avoid spray drift to any desirable vegetation. Coarse sprays are less likely to drift. Do not spray during periods of high winds.

# **Pre-harvest Intervals:**

Do not permit lactating dairy animals to graze fields within 7 days after application. Do not harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

**Restricted-Entry Interval (REI):** Do not enter treated area within 12 hours after application.

## **MIXING:**

Shake well before using. To ensure even mixing, half fill the sprayer tank with clean water, add the required amount of SALVO 2,4-D Ester 700 Liquid Herbicide and agitate thoroughly. Add the remainder of the water and agitate before spraying. If the spray solution has been left standing, agitate thoroughly before use. Wash sprayer thoroughly after use.

For containers larger than 20L: Use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

# **EQUIPMENT AND SPRAY VOLUME:**

Apply in 50 to 200 litres of water per hectare by ground equipment unless otherwise indicated. Higher water volumes will reduce the risk of crop injury.

Apply in a minimum of 30 litres of water per hectare by aerial equipment.

Use spray nozzles and pressures that deliver a medium to coarse quality spray. Avoid generating fine, driftable droplets.

For knapsack, spot treatment applications, mix 200 mL of product in 10 L water. Spray to wet all foliage thoroughly.

## TANK MIXES:

SALVO 2, 4-D Ester 700 Liquid Herbicide may be recommended in tank mix with other products.

Consult the label of the tank mix partner product, and follow the most stringent set of precautions, restrictions and directions for use.

# CROPS, TIMING, RATES AND METHODS OF APPLICATION:

Use the dose required to control the weeds present.

To minimize the risk of crop injury, do not exceed the recommended rate listed for the crop.

Higher rates may be required to control certain weed species. Rates above those recommended for a crop may result in significant crop injury, and should only be used when the risk of crop injury will be offset by the benefits of enhanced weed control. Apply in warm weather when the crop and weeds are growing well, and the weeds are at a susceptible stage.

Avoid application during drought conditions or during exceptionally hot weather.

# CROP:

Red skinned potatoes (i.e. for Skin Colour Enhancement of Red Skinned Potatoes)

**RATE TO USE:** 118.9 mL per ha (78.5 g a.i./ha)

**NUMBER OF APPLICATIONS:** 2 applications per year

**APPLICATION TIMING/INTERVAL:** The first application at pre-bud stage and the

second application at 10-14 days after the first application **APPLICATION METHOD:** Broadcast foliar by ground only **SPRAY VOLUME:** 50 – 250 L spray solution per hectare

PRE-HARVEST INTERVAL: 24 days

**ADDITIONAL USE DIRECTIONS:** Application of this herbicide on potatoes may result in crop injury, but tuber yield should not be affected.

For use in red potatoes grown for fresh market only

# **CROP:**

Spring Cereals (Wheat, Barley, Rye), not underseeded with legumes

# **APPLICATION TIME:**

From the 4-leaf expanded to the early flag-leaf (shot blade) stage.

# **METHOD:**

Ground or Aerial application.

# **RECOMMENDED RATE PER HECTARE:** Up to 1.1 L.

Do not apply more than once per year.

## **CROP:**

Winter Cereals (Winter Wheat, Fall Rye)

## **APPLICATION TIME:**

In spring, from full tillering to the shot blade stage.

Do not apply during and after the flag-leaf stage.

Do not apply to seedling winter cereals in the fall.

# **METHOD:**

Ground or Aerial application.

**RECOMMENDED RATE PER HECTARE:** Up to 0.8 L.

Do not apply more than once per year.

# **CROP:**

Field Corn

## **APPLICATION TIME:**

As an overall spray, before the corn is 15 cm tall (leaf extended) and/or before the 6-leaf stage. Application as an overall spray at later stages will damage the corn.

For later applications (corn 15-75 cm, leaf extended), use a shielded spray or a directed spray with drop pipes. Keep spray off corn foliage.

Do not apply within 2 weeks of silking and tasselling.

Avoid cultivation for 2 weeks following spraying.

Use at least 100 L/ha water.

Do not add oil or surfactant.

# **METHOD:**

Ground or Aerial application.

# **RECOMMENDED RATE PER HECTARE:** Up to 0.8 L.

Do not apply more than once per year.

## **CROP:**

Established Grasses Grown for Forage and Seed Production

# **APPLICATION TIME:**

In spring, up to the shot blade stage of the grass, or in fall, after harvest.

Application during flower development or pollination will reduce seed yield.

Use at least 100 L/ha water.

## **METHOD:**

Ground or Aerial application.

# RECOMMENDED RATE PER HECTARE:

Up to 0.8 L (crops for seed production)

Up to 1.6 L (hay or pasture crops)

Do not apply more than twice per year.

## **CROP:**

Established Pasture and Rangeland (without legumes)

## APPLICATION TIME:

Apply at a time of rapid growth, usually May, June and/or September.

Apply after pasture has been grazed or cut and weed growth has resumed.

Spray thoroughly using 100 to 300 litres of water per hectare.

A second treatment may be required to control perennial weeds.

Do not apply in freshly seeded grasses and pastures until well established.

Under conditions of good growth and adequate soil moisture, sprays can be applied up to 2 weeks before normal frost time.

# **METHOD:**

Ground or Aerial application.

# **RECOMMENDED RATE PER HECTARE:** Up to 3.4 L.

Do not apply more than twice per year.

## **CROP:**

Stubble Land, Roadsides, Uncropped Land, Airport

# **APPLICATION TIME:**

Apply at a time of rapid growth, usually May, June and/or September.

Spray thoroughly using 100 to 300 litres of water per hectare.

A second treatment may be required to control perennial weeds.

Cultivating grain stubble and spraying after regrowth may aid in control.

Under conditions of good growth and adequate soil moisture, sprays can be "applied up to 2 weeks before normal frost time.

# **METHOD:**

Ground or Aerial application (stubble land and uncropped land).

Ground application (roadsides).

**RECOMMENDED RATE PER HECTARE:** Up to 2.35 L.

Do not apply more than twice per year.

# **CROP:**

Golf Courses (roughs and fairways only), sod farms

# **APPLICATION TIME:**

This product is only effective when applied to the leaves of actively growing weeds. This product will not prevent new weeds—apply only when weeds are present. If weed populations do not warrant a broadcast application (e.g., entire turf area), consider spot treatments that target only weedy areas. This product is designed to target treatment of weedy areas of turf. This product may injure desirable ornamentals and vegetables.

Apply at a time of rapid growth, usually May, June and/or September, before grasses are in the flag-leaf (shot blade) stage.

Spray thoroughly using 100 to 300 litres of water per hectare.

Do not use on bentgrass or newly seeded areas.

Avoid mowing for several days before and after treatment.

Do not apply if rainfall is expected, or irrigating, within 24 hours.

Applications while plants are under stress, such as during hot, cold or drought conditions, will increase risk of damage to turf and can result in reduced weed control.

Use caution when spraying near sensitive desirable vegetation.

Do not allow people (other than the applicator) or pets onto the treatment area during application.

Do not enter treated areas until spray has thoroughly dried.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray

droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification.

## **METHOD:**

DO NOT apply by air. Ground application only.

# **MAXIMUM APPLICATION FREQUENCY:**

DO NOT apply more than two broadcast applications per season. This does not include spot treatments.

# **RECOMMENDED RATE PER HECTARE:**

Up to 1.9 L at each application.

Up to 3.8 L per year, total.

Do not apply more than twice per year.

# CONTROL OF WOODY GROWTH IN NON-GRAZED AREAS:

Apply at time of rapid growth, usually May, June and/or September.

Apply 3.25 to 6.8 litres of product, by ground in 1000 to 3000 litres of water per hectare.

For aerial applications use 55 to 165 litres of spray solution per hectare.

For oil water carrier, use 15 litres of oil mixed in 40 litres of water with continuous agitation.

Use the lower rate for species that are more susceptible such as chokecherry, western snowberry and willow. Do not apply more than twice per year.

Spray brush species up to 3 metres tall after foliage is well developed.

Applications soon after leaves are fully open usually give the best results.

Apply sufficient spray volume to thoroughly wet all plant parts to the ground line.

Brush or trees above 3 metres tall should be cut close to the ground and sprayed when the regrowth is over 0.6 m tall.

With good growing conditions and adequate soil moisture, sprays may be applied up to 2 to 3 weeks before normal frost time.

To reduce potential drift hazard, a drift control agent may be added. Follow directions on the drift control agent label for the correct mixing sequence. Ground or aerial application.

## BASAL BARK AND STUMP TREATMENT:

Controls hard-to-kill woody brush and young trees.

The solution can be applied to the basal part of standing brush and young trees during any time of the year, prior to formation of corky bark.

To prevent regrowth treat stumps immediately after cutting by spraying or painting stumps, exposed roots and cut surface.

Thorough drenching is essential.

Mix 2.5 L in 100 L of fuel oil. Spray to run-off.

## **WEEDS CONTROLLED:**

# **Susceptible Weeds:**

Annual sow-thistle, Bluebur (before the 4-leaf stage), Burdock (before the 4-leaf stage), Cocklebur, Daisy fleabane, False flax, False ragweed, Flixweed, Giant ragweed, Goat's-beard, Kochia, Lamb's-quarters, Mustards (except Dog and Tansy), Narrow-leaved hawk's-beard (in fall, and at the 1- to 2-leaf stage in spring), Plantain, Prickly lettuce, Ragweeds, Redroot pigweed, Russian pigweed, Russian-thistle, Shepherd's-purse, Stinging nettle, Stinkweed, Sweet Clover (seedling), Thyme-leaved spurge, Volunteer canola, Wild radish, Wild (prairie) sunflower

# **Rates to Control Susceptible Weeds:**

Small seedlings (2- to 4-leaf), growing rapidly, good growing conditions: 0.5 to 0.8 L/ha. Large weeds, dry or cold weather, heavy infestations: 0.8 L/ha. Resistance increases with age.

## **Harder-To-Control Weeds:**

Curled dock (apply before 4-leaf stage), Dog mustard, Field pepper-grass, Flixweed (if treated before bolting in spring), Groundsel, Hairy galinsoga, Hawkweed, Heal-all, Knotweed (apply before the 4-leaf stage), Narrow-leaved hawk's-beard (if treated before bolting in spring), Oak-leaved goosefoot, Pineappleweed, Prostrate pigweed, Purslane, Sheep sorrel, Tansy mustard, Tumble pigweed, Velvetleaf.

# **Rates for Harder-To-Control Weeds:**

Small seedlings (2- to 4-leaf), growing rapidly, good growing conditions: 0.9 to 1.3 L/ha. Large weeds, dry or cold weather, heavy infestations: 1.3 L/ha. Resistance increases with age.

# **Very-Hard-to-Control Weeds – Only Top Growth Control Can Be Expected:**

Biennial wormwood, Blue lettuce, Bull thistle, Burdock, Buttercup, Canada thistle, Chicory, Curled dock, Dandelion, Field bindweed, Field chickweed\*, Field horsetail\*, Gumweed, Hedge bindweed, Hemp-nettle\* (if treated before the 4-leaf stage), Hoary cress, Lady's-thumb\*, Leafy spurge, Mouse-eared chickweed\*, Perennial sow-thistle, Russian knapweed, Scentless mayweed, Smartweed\*, Tartary buckwheat, Teasel, Volunteer sunflower, Wild buckwheat\*, Yellow rocket (controlled with applications before 4-leaf stage).

\* Use highest listed rate for suppression.

# **Rates for Top Growth Control of Very-Hard-To-Control Weeds:**

Small seedlings (2- to 4-leaf), growing rapidly, good growing conditions: 1.1 to 1.3 L/ha. Large weeds, dry or cold weather, heavy infestations: 1.3 L/ha. Resistance increases with age.

# CONTROL OF GIANT RAGWEED IN SOYBEAN

# 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 use(s) described below were developed by persons other than Loveland Products Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion Program. Loveland Products Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Loveland Products Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use described below.

#### **DIRECTIONS**:

**Crop:** Soybeans **Pest:** Giant ragweed **Application Time:** 

Pre-emergent to soybean (applied a minimum of 7 days before planting)

Post-emergent to giant ragweed

**Method:** Ground application

**Recommended Rate per Hectare:** 0.5 - 0.8 L/ha

**USE PRECAUTION:** Do not use in sandy soils with less than 1% organic matter. Plant soybean seeds as deep as possible, but not less than 2.5 cm. Adjust planter to ensure adequate coverage of planted seed.

**DO NOT** graze or cut treated crops for forage or hay until 67 days after application. **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

**Spray Volume:** 50 - 200 L/ha

**Number of Applications:** One per season **Pre-harvest Interval (PHI):** 90 days

**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.

**RESTRICTED USE:** FOREST AND WOODLAND MANAGEMENT NATURE OF RESTRICTION: This product is to be used only in the manner authorized. Consult local pesticide regulatory authorities about use permits that may be required.

**CONIFER RELEASE - AERIAL APPLICATION:** To control undesirable hardwood species in stands of fir, hemlock, spruce and pine regeneration apply SALVO 2,4-D Ester 700 at 3.63 to 4.7 L/ha in 30 to 80 L/ha of total spray mixture. Use water or an "oil-water"\* mixture. Never allow any water or mixture containing water to get into the SALVO 2, 4-D Ester 700 or the oil spray premix. Note: SALVO 2, 4-D Ester 700 in water or oil-water sprays forms an emulsion, not a solution, and separation may take place unless sprays are agitated continuously until used up. Mechanical agitation is recommended.

To prevent conifer damage, delay spraying until all new conifer growth has hardened off, when the terminal buds feel sharp to touch.

Caution should be taken to ensure that the conifer is not in a second phase of active or "lammas" growth in late summer. Hardwoods should not have commenced fall colouration. Control of heavy suckering species such as maple, trembling aspen and balsam poplar may only be partial. Raspberries will not be controlled and may if present proliferate following removal of the hardwood overstory.

**FOREST SITE PREPARATION - AERIAL APPLICATION:** To control mixed hardwood species on sites to be planted to conifers, use 4.7 to 6.78 litres of SALVO 2, 4-D Ester 700 in 30 to 100 litres of total spray mixture per hectare. Apply as a uniform spray when the foliage is well developed and the brush is actively growing. Under conditions of good growth and high soil moisture, sprays can be used 2 to 3 weeks before normal frost time. For best results use a 10% oil-water\* mixture.

**NOTE:** When preparing sites for planting do not plant conifers before spraying as the conifers present at the time of spraying may be injured or killed. To reduce potential drift hazard on non-crop locations, a drift control agent may be added. Follow all directions on the drift control agent label for the correct mixing sequence. Do not apply more than twice per year.

\* To prepare the "oil-water" mixture add the SALVO 2, 4-D Ester 700 to the oil in a separate container. With vigorous agitation 1 litre of SALVO 2, 4-D Ester 700 will emulsify up to 10 litres of oil in 100 litres of spray mixture. Start running the water into the empty spray tank, then slowly add the premix with continuous agitation. All the premix should be in the tank by the time 1/3 of the water is in. If the premix is put in the tank without any water, the first water added may form a thick "invert" (water in oil) emulsion which will be hard to break.

**USE PRECAUTIONS**: With aircraft, uniform coverage can be obtained and drift minimized by using 235 kPa spray pressure or less at the nozzle, by using nozzles directed straight back, by using a spray boom no larger than 3/4 the wing span of the aircraft and by spraying when wind velocity is less than 8 km/h.

# **Generic Aerial Application Label Instructions Directions for Use**

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.

BEFORE AERIAL APPLICATION TO FORESTS – Consult the most recent provincially approved topographic maps of the area to be treated (1:50 000) or more upto-date information (e.g. GPS Systems) to identify sensitive aquatic habitats.

Sensitive aquatic habitats include:

- a) All running (lotic) and standing (lentic) water bodies, including impoundments, beaver ponds and bog ponds, that appear on the map or GPS system;
- b) Running (lotic) and standing (lentic) water bodies that do not appear on the map or GPS system but are visible from the air.

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

## **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.

# **Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer or obtain technical advice from the distributor or your provincial agricultural representative.



# SAFETY DATA SHEET

SDS REVISIONS: SEC. 1

SALVO® 2,4-D ESTER PCP 27818

DATE OF ISSUE: 10/29/18 SUPERSEDES: 10/25/16

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or CHEMTREC – DAY OR NIGHT 1 800-424-9300

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER:

TRADE NAME: SALVO® 2,4-D ESTER
1.2 RECOMMENDED USE: GROUP 4 HERBICIDE

1.3 DISTRIBUTED BY:

LOVELAND PRODUCTS CANADA, INC.

789 DONNYBROOK DRIVE • DORCHESTER, ONTARIO NOL 1G5

1.4 24 Hour Emergency Phone: (Chemtrec): 1-800-424-9300 (Toll Free) - Additional Emergency Phone 1-800-561-8273

Loveland Technical Service: 1-800-328-4678

U.S. Coast Guard National Response Center: 1-800-424-8802

#### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Acute Toxicity – Oral	Category 4	H302
Eye Damage/Irritation	Category 2B	H320
Sensitization – Skin	Category 1	H317
Specific Target Organ Toxicity (Single Exposure)	Category 1	H370
Specific Target Organ Toxicity (Repeated Exposure)	Category 1	H372

#### 2.2 Label elements





Signal word: DANGER

Hazard Statement: H302 – Harmful if swallowed.

H313 – May be harmful in contact with skin.

H320 - Causes eye irritation.

H317 - May cause an allergic skin reaction.

H370 - Causes damage to organs.

H372 - Causes damage to organs through prolonged or repeated exposure.

H401 – Toxic to aquatic life.

Precautionary

Statement: P264 – Wash face, hands and any exposed skin thoroughly after handling.

(Prevention): P270 – Do not eat, drink or smoke when using this product.
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.

P271 – Use only outdoors or in a well-ventilated area. P201 – Obtain special instructions before use.

P202 – Do not handle until all safety precautions have been read and understood. P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P260 – Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary

Statement: P301+P312: IF SWALLOWED: Call a poison centre or doctor/physician if you feel unwell.

(Response): P330 – Rinse mouth.

P304+P340: IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P312 – Call a poison centre or doctor/physician if you feel unwell.
P308+P313 – If exposed or concerned: Get medical advice/attention.
P307+P311 – If exposed: Call a poison centre or doctor/physician.

P321 - Specific treatment (see NOTE TO PHYSICIAN on the product label).

P314 - Get medical advice/attention if you feel unwell.

Precautionary Statement:

(Storage): P405 – Store locked up.

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Precautionary Statement:

(Disposal) P501 – Dispose of contents/container to an approved waste disposal to an approved waste disposal facility.

#### 2.3 Other hazards

None known.

#### 3. COMPOSITION, INFORMATION ON INGREDIENTS

#### 3.1 Substances

#### 3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
2-ethylhexyl ester of 2,4-D	1928-43-4	660 g.a.e./ L   81.8
Other ingredients*, contains	n/a	18.2
Benzenesulfonic acid, dodecyl-, branched	27176-87-0	<4
Distillates (Petroleum) Hydrotreated Light	64742-47-8	<10
Ethoxylated castor oil	61791-12-6	<1
Proprietary surfactant blend	Proprietary	<6

<sup>\*</sup>Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information

# 4. FIRST AID MEASURES

## 4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

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 the poison control centre or doctor. Do not give anything by mouth to an

unconscious person.

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

doctor for treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5

minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

## 4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Central nervous system effects.

## 4.3 Immediate Medical Attention and Special Treatment

Treatment: This product contains petroleum distillates.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273

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

NOTES TO PHYSICIAN: Contains petroleum distillates. If in eyes specialized ophthalmologic attention may be necessary. If swallowed probable

mucosal damage may contraindicate gastric lavage. There is no specific antidote. Employ supportive care and treat

symptomatically.

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#### 5. FIRE FIGHTING MEASURES

#### 5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, soft stream or

water fog only if necessary.

## 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: None known.

# 5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving

chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and

deny unnecessary entry.

## 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions:

Avoid inhalation of vapours and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

## **6.2 ENVIRONMENTAL PRECAUTIONS**

**Environmental Precautions:** 

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark except as noted on appropriate labels. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up:

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to

Remove residual contamination.

Never return spills to original containers for re-use.

#### 7. HANDLING AND STORAGE

#### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### 7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers:

Open dumping is prohibited. Avoid contamination of fertilizers, seeds, plants, insecticides, and fungicides in storage. Store in original container and out of reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If product is stored below freezing, it is suggested that it be allowed to warm to at least 4.4 °C and be agitated before use. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away. Do not contaminate water, food or feed by storage or disposal.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

**OCCUPATIONAL EXPOSURE LIMITS** 

U.S. Workplace Exposure Level (ACGIH) TLVs

Components Type Value

2,4-D (CAS: 94-75-7) TLV 10 mg/m³ (Skin)

Measured as inhalable fraction of the aerosol

U.S. Workplace Exposure Level (OSHA) PELs

Components Type Value

2,4-D TWA 10 mg/m<sup>3</sup>

**Biological limit values** 

**ACGIH Biological Exposure Indices** 

Components Value Specimen

No listings

#### **8.2 EXPOSURE CONTROLS:**

#### **Engineering Measures**

Pilots must use an enclosed cockpit that meets the requirements listed in WPS for agricultural pesticides [40 CFR 170.240(d)(6). 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.

#### **Individual Protection Measures:**

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Long-sleeved shirt and long pants. Shoes plus socks. Chemical-resistant gloves, except for pilots. Chemical-resistant

apron for mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

Respiratory Protection: Not normally required. If respirators are used, a program should be in place to assure compliance with 29 CFR

1910.134, the OSHA Respiratory Protection standard.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1** APPEARANCE : Liquid ODOUR: Mild.

ODOUR THRESHOLD: No data available.
COLOUR: Light amber.

pH: 3.29

MELTING POINT / FREEZING POINT: No data available
BOILING POINT: No data available

FLASH POINT: 81 °C (TCC).
FLAMMABILITY (solid, gas): No data available.

UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.

VAPOUR PRESSURE: No data available. SOLUBILITY: Emulsifies.

PARTITION CO-EFFICIENT, n-OCTANOL / WATER: No data available.

AUTO-IGNITION TEMPERATURE: No data available. DECOMPOSITION TEMPERATURE: No data available. VISCOSITY: 26.5 cP @ 25 °C. SPECIFIC GRAVITY (Water = 1): 1.104 g/ml DENSITY: 1.1 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.



## SAFETY DATA SHEET

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# 10. STABILITY AND REACTIVITY

#### 10.1 REACTIVITY

Stable

#### 10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

# 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

#### 10.4 CONDITIONS TO AVOID

Excessive heat.

#### 10.5 INCOMPATIBILE MATERIALS

Strong oxidizers.

#### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known; however, some chlorine-containing compounds or other hazardous products may be formed in a fire situation. Incomplete combustion may lead to formation of oxides of carbon and/or other asphyxiants.

#### 11 TOXICOLOGICAL INFORMATION

## 11.3 LIKELY ROUTES OF EXPOSURE

Ingestion. Eye contact. Skin absorption. Skin contact.

**LC**<sub>50</sub> (rat): 5.43 mg/L (4 HR) **LD**<sub>50</sub> Oral (rat): 1250 mg/kg

LD<sub>50</sub> Dermal (rabbit): > 2,000 mg/kg
Acute Toxicity Estimates: No data available
Skin Irritation (rabbit): May cause mild irritation.
Eye Irritation (rabbit): Moderate eye irritation.

Specific Target Organ Toxicity: Skin, Central Nervous System, Liver, Kidneys.

**Aspiration:** Vomiting may cause aspiration pneumonia.

Skin Sensitization (guinea pig): Sensitizer

Carcinogenicity: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen)

Germ Cell Mutagenicity: No data available.

Interactive Effects: None known

## 12 ECOLOGICAL INFORMATION

#### 12.3 ECOTOXICITY

The product is toxic to fish and aquatic invertebrates. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Information below is based on the technical ingredient 2,4-D acid.

#### **Ecotoxicological Data**

	Species	Test Results	
2,4-D Acid	Rainbow trout	245 mg/L – 96-hour LC50	<u>.</u>
	Bluegill	524 mg/L – 96-hour LC <sub>50</sub>	
	Fathead minnow	344 mg/L – 96-hour LC <sub>50</sub>	
	Pink shrimp	181 mg/L – 96-hour LC <sub>50</sub>	
	Daphnia magna	184 mg/L – 96-hour LC <sub>50</sub>	
	Tidewater silverside	469 mg/L -96-hour LC50	
	Eastern oyster	136 mg/L – 48-hour EC <sub>50</sub>	

Drift or runoff may adversely affect non-target plants.

Do not apply directly to water.

Do not contaminate water when disposing of equipment wash water.

Do not apply when weather conditions favor drift from target area.

## 12.2 PERSISTENCE AND DEGRADABILITY

Biochemical oxygen demand is 0.72 for 5, 10 and 20 days. Chemical oxygen demand is 0.72. Under aerobic soil

conditions the half-life is 4 - 23 days. Under aerobic aquatic conditions, the half-life is 0.5 - 11 days.

## 12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or log Pow < 3).

### 12.4 MOBILITY IN SOIL

High (50 < Koc < 150). Soil organic carbon/water partition coefficient (Koc) is 72-136.

#### 12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.



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#### 13 **DISPOSAL CONSIDERATIONS**

#### 13.1 WASTE TREATMENT METHODS

For recyclable containers: DO NOT reuse the container for any other 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: Triple-or pressure-rinse the empty container. Dispose of rinsate in accordance with provincial requirements. Make the rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For refillable containers: For disposal, the 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 the product container for any other purpose

#### TRANSPORT INFORMATION 14

#### 14.3 LAND TRANSPORT

TDG Shipping Description: NOT REGULATED (Packages may be marked with US DOT markings and labels)

DOT Shipping Description: Greater than 20 gallons: RQ UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III (2,4-D), ERG GUIDE 171

U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS: 60)

#### 15 REGULATORY INFORMATION

## 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings: **NFPA HMIS** Health Least Health Flammability Slight Flammability Instability 2 Moderate 0 Reactivity 3

D High PPE

Severe

SARA Hazard Notification/Reporting

Sudden Release of Pressure SARA Title III Hazard Category: **Immediate** Fire N Delayed Reactive

Reportable Quantity (RQ) under U.S. CERCLA: 2,4-D Acid (CAS: 94-75-7) 100 pounds. SARA, Title III, Section 313: 2,4-D 2-ethylhexyl ester (CAS: 1928-43-4): 81.8%

RCRA Waste Code: U240; D016. CA Proposition 65: Not listed.

WHMIS [Canada]: Pest control products are not controlled under WHMIS. Classified D2B

#### 16 OTHER INFORMATION

SDS STATUS: Section 1 revised.

PREPARED BY: Product Stewardship and Regulatory Affairs REVIEWED BY: Safety, Health and Environment

Pest Control Products Act REG. NO.: 27818

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**BASE** 

GROUP 4 HERBICIDE

# **SALVO®**

# **2,4-D ESTER 700**

# **EMULSIFIABLE CONCENTRATE**

# HERBICIDE COMMERCIAL



**POISON** 

# POTENTIAL SKIN SENSITIZER

WARNING - SKIN IRRITANT

# KEEP OUT OF REACH OF CHILDREN

# READ THE LABEL AND THE BOOKLET BEFORE USING

**ACTIVE INGREDIENT:** 2,4-D, present as 2-ethyl hexyl ester...660 g a.e./L

REGISTRATION NO. 27818 PEST CONTROL PRODUCTS ACT

IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT, 1-800-561-8273

LOVELAND PRODUCTS CANADA INC. 789 DONNYBROOK DRIVE DORCHESTER, ONTARIO NOL 1G5 1-800-328-4678

NET CONTENTS: 10, 115, 205, 1000 L

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KEEP OUT OF REACH OF CHILDREN. Fatal or poisonous if swallowed. Potential skin sensitizer. Causes skin irritation. DO NOT get on skin. Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes IMMEDIATELY. After use, wash hands and other exposed skin. Avoid breathing spray mist.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at www.croplife.ca.

For product and use information, contact Loveland Products Canada Inc. 1-800-328-4678.

# **ENVIRONMENTAL HAZARDS:**

Avoid contamination of ponds, streams, rivers and other water sources.

This product contains a petroleum distillate, which is moderately to highly toxic to aquatic organisms.

DO NOT apply this product directly to freshwater habitats such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands, estuaries or marine habitats.

DO NOT contaminate irrigation/drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. Toxic to broadleaf terrestrial plants. This product may harm other broadleaf plants in the vicinity of the treatment area. If applying this product using a mechanically pressurized handgun, do not directly spray or allow the spray to drift onto ornamentals or gardens.

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

Do not spray exposed roots of trees and ornamentals.

## Leaching:

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. To minimize possible contamination of groundwater, the use of spot treatment application is recommended.

## Run-off:

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

Avoid application of this product when heavy rain is forecast.

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

To prevent runoff from domestic uses avoid spraying on driveways, sidewalks or other hard surfaces. Do not irrigate within 24 hours after application.

# PROTECTIVE CLOTHING AND EQUIPMENT:

Handling the concentrate (mixing and loading): Wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes. Rinse gloves before removal.

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 5 kg a.e. (7.58 L) per day. DO NOT handle more than 8 kg a.e. (12.1 L) per day.

When handling more than 265 kg a.e. per day (402 L), workers must also use a closed system.

Handling the dilute spray solution (during application or repairing or cleaning equipment): Wear a long-sleeved shirt, long pants, coveralls, chemical-resistant gloves, socks and shoes. Rinse gloves before removal.

**Ground Application:** Applicators (mixers/loaders) must wear coveralls over a long-sleeved shirt, long pants and chemical-resistant gloves.

Gloves are not required during application when applicator is in an enclosed tractor or an enclosed airplane cockpit.

**Aerial Application:** Applicators must wear coveralls over a long-sleeved shirt and long pants. Chemical-resistant gloves must also be worn during clean-up and repair activities. No human flaggers are permitted.

# **OPERATOR USE PRECAUTIONS:**

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
- Wash hands before eating, drinking, using tobacco or using the toilet.
- If herbicide penetrates clothing remove immediately; then wash thoroughly and put on clean clothing. Throw away clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- After using this product, remove clothing and launder separately and promptly, and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's instructions for cleaning personal protective clothing and equipment. If no such instructions for washables are provided, use detergent and hot water. Keep and wash personal protective equipment separate from household laundry.

• After work, remove all clothing and shower using soap and water.

## FIRST AID:

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 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 SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by poison control centre or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

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.

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

# **TOXICOLOGICAL INFORMATION:**

This product may cause mild irritation to the eyes. Overexposure to 2, 4-D may cause coughing, burning, dizziness or temporary loss of muscle coordination. Other possible effects of overexposure include fatigue, muscle weakness or nausea. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. Treat symptomatically.

# **STORAGE CONDITIONS:**

Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. If this product is exposed to temperatures below  $-20^{\circ}$  C, it should be warmed to at least  $5.0^{\circ}$  C and mixed

thoroughly before using SHAKE WELL BEFORE USING.

# **DISPOSAL/DECONTAMINATION:**

# For Recyclable Containers:

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

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 5 kg a.e. per day (sufficient to treat approximately **7.58 L/day** at the rate of **0.66 kg a.e./L**).

DO NOT handle more than 8 kg a.e. per day (sufficient to treat approximately 12.1 L/day at the rate of 0.66 kg a.e./L).

**Field sprayer application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

**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) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies that minimize off-site drift, including meteorological conditions (e.g. wind direction, low wind speed) and spray equipment (e.g. coarse droplet sizes, minimizing height above canopy), should be used. Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats. For the use of the herbicide in site preparation and conifer release in forestry, terrestrial buffer zones are not required.

## **RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, SALVO 2, 4-D Ester 700 Liquid Herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to SALVO 2, 4-D Ester 700 Liquid Herbicide and other Group 4 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

# To delay herbicide resistance:

- Where possible, rotate the use of SALVO 2, 4-D Ester 700 Liquid Herbicide or other Group 4 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 treated 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 Loveland Products Canada Inc., 1-800-328-4678 or at www.lovelandproducts.ca.

## **BUFFER ZONES:**

Use of the following spray methods or equipment DO NOT require a buffer zone: mechanically pressurized handgun or backpack sprayer and spot treatment.

The buffer zones specified in the tables 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), and estuarine/marine habitats.

	Стор			Buffer Zones (metres) Required for the Protection of:				
Method of				Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		_
Application				Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	Terrestrial Habitat
Field Sprayer*	Golf courses, turf			1	0	1	0	1
	Field crops (cereal grains, corn, grain and forage sorghum)			1	1	1	1	1
	Grasslands, fallowland and crop stubble, pastures, rangelands, non-cropland (including rights-of-way** and brush control)			1	1	1	1	2
Aerial	Field crops (cereal grains, corn, grain and forage sorghum)  Grasslands, fallowland and crop stubble, pastures and rangelands		Fixed wing	10	0	1	0	45
			Rotary wing	10	0	1	0	40
			Fixed wing	15	0	1	0	60
			Rotary wing	15	0	1	0	50
	Non- cropland (including rights-of- way**and brush control)	3.4 L/ha (2.24 kg a.e./ha)	Fixed wing	70	0	1	0	150
			Rotary wing	35	0	1	0	80
		6.8 L/ha (4.48 kg a.e. /ha)	Fixed wing	125	1	15	1	225
			Rotary wing	50	1	5	1	100
	Forestry (site preparat- ion)	2.4 kg a.e./ha	Fixed wing	175	0	1	1	NR
			Rotary wing	95	0	1	0	NR
		3.1 kg a.e./ha	Fixed wing	225	1	1	0	NR
			Rotary wing	125	1	1	0	NR
		4.48 kg a.e./ha	Fixed wing	350	1	20	1	NR
			Rotary wing	175	1	10	1	NR

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

<sup>\*\*</sup> For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required.

NR - buffer zones not required.

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

## **GENERAL USE PRECAUTIONS:**

SALVO 2, 4-D Ester 700 Liquid Herbicide may cause damage to susceptible crop, ornamental, and other plants, even in minute quantities.

Avoid spray drift to any desirable vegetation. Coarse sprays are less likely to drift. Do not spray during periods of high winds.

## **Pre-harvest Intervals:**

Do not permit lactating dairy animals to graze fields within 7 days after application. Do not harvest forage or cut hay within 30 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

**Restricted-Entry Interval (REI):** Do not enter treated area within 12 hours after application.

### **MIXING:**

Shake well before using. To ensure even mixing, half fill the sprayer tank with clean water, add the required amount of SALVO 2,4-D Ester 700 Liquid Herbicide and agitate thoroughly. Add the remainder of the water and agitate before spraying. If the spray solution has been left standing, agitate thoroughly before use. Wash sprayer thoroughly after use.

For containers larger than 20L: Use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

# **EQUIPMENT AND SPRAY VOLUME:**

Apply in 50 to 200 litres of water per hectare by ground equipment unless otherwise indicated. Higher water volumes will reduce the risk of crop injury.

Apply in a minimum of 30 litres of water per hectare by aerial equipment.

Use spray nozzles and pressures that deliver a medium to coarse quality spray. Avoid generating fine, driftable droplets.

For knapsack, spot treatment applications, mix 200 mL of product in 10 L water. Spray to wet all foliage thoroughly.

#### TANK MIXES:

SALVO 2, 4-D Ester 700 Liquid Herbicide may be recommended in tank mix with other products.

Consult the label of the tank mix partner product, and follow the most stringent set of precautions, restrictions and directions for use.

# CROPS, TIMING, RATES AND METHODS OF APPLICATION:

Use the dose required to control the weeds present.

To minimize the risk of crop injury, do not exceed the recommended rate listed for the crop.

Higher rates may be required to control certain weed species. Rates above those recommended for a crop may result in significant crop injury, and should only be used when the risk of crop injury will be offset by the benefits of enhanced weed control. Apply in warm weather when the crop and weeds are growing well, and the weeds are at a susceptible stage.

Avoid application during drought conditions or during exceptionally hot weather.

# CROP:

Red skinned potatoes (i.e. for Skin Colour Enhancement of Red Skinned Potatoes)

**RATE TO USE:** 118.9 mL per ha (78.5 g a.i./ha)

**NUMBER OF APPLICATIONS:** 2 applications per year

**APPLICATION TIMING/INTERVAL:** The first application at pre-bud stage and the

second application at 10-14 days after the first application **APPLICATION METHOD:** Broadcast foliar by ground only **SPRAY VOLUME:** 50 – 250 L spray solution per hectare

PRE-HARVEST INTERVAL: 24 days

**ADDITIONAL USE DIRECTIONS:** Application of this herbicide on potatoes may result in crop injury, but tuber yield should not be affected.

For use in red potatoes grown for fresh market only

# **CROP:**

Spring Cereals (Wheat, Barley, Rye), not underseeded with legumes

# **APPLICATION TIME:**

From the 4-leaf expanded to the early flag-leaf (shot blade) stage.

## **METHOD:**

Ground or Aerial application.

# **RECOMMENDED RATE PER HECTARE:** Up to 1.1 L.

Do not apply more than once per year.

#### **CROP:**

Winter Cereals (Winter Wheat, Fall Rye)

### **APPLICATION TIME:**

In spring, from full tillering to the shot blade stage.

Do not apply during and after the flag-leaf stage.

Do not apply to seedling winter cereals in the fall.

## **METHOD:**

Ground or Aerial application.

**RECOMMENDED RATE PER HECTARE:** Up to 0.8 L.

Do not apply more than once per year.

## **CROP:**

Field Corn

### **APPLICATION TIME:**

As an overall spray, before the corn is 15 cm tall (leaf extended) and/or before the 6-leaf stage. Application as an overall spray at later stages will damage the corn.

For later applications (corn 15-75 cm, leaf extended), use a shielded spray or a directed spray with drop pipes. Keep spray off corn foliage.

Do not apply within 2 weeks of silking and tasselling.

Avoid cultivation for 2 weeks following spraying.

Use at least 100 L/ha water.

Do not add oil or surfactant.

## **METHOD:**

Ground or Aerial application.

# **RECOMMENDED RATE PER HECTARE:** Up to 0.8 L.

Do not apply more than once per year.

#### **CROP:**

Established Grasses Grown for Forage and Seed Production

# **APPLICATION TIME:**

In spring, up to the shot blade stage of the grass, or in fall, after harvest.

Application during flower development or pollination will reduce seed yield.

Use at least 100 L/ha water.

#### **METHOD:**

Ground or Aerial application.

# RECOMMENDED RATE PER HECTARE:

Up to 0.8 L (crops for seed production)

Up to 1.6 L (hay or pasture crops)

Do not apply more than twice per year.

#### **CROP:**

Established Pasture and Rangeland (without legumes)

#### APPLICATION TIME:

Apply at a time of rapid growth, usually May, June and/or September.

Apply after pasture has been grazed or cut and weed growth has resumed.

Spray thoroughly using 100 to 300 litres of water per hectare.

A second treatment may be required to control perennial weeds.

Do not apply in freshly seeded grasses and pastures until well established.

Under conditions of good growth and adequate soil moisture, sprays can be applied up to 2 weeks before normal frost time.

# **METHOD:**

Ground or Aerial application.

## **RECOMMENDED RATE PER HECTARE:** Up to 3.4 L.

Do not apply more than twice per year.

#### **CROP:**

Stubble Land, Roadsides, Uncropped Land, Airport

## **APPLICATION TIME:**

Apply at a time of rapid growth, usually May, June and/or September.

Spray thoroughly using 100 to 300 litres of water per hectare.

A second treatment may be required to control perennial weeds.

Cultivating grain stubble and spraying after regrowth may aid in control.

Under conditions of good growth and adequate soil moisture, sprays can be "applied up to 2 weeks before normal frost time.

# **METHOD:**

Ground or Aerial application (stubble land and uncropped land).

Ground application (roadsides).

**RECOMMENDED RATE PER HECTARE:** Up to 2.35 L.

Do not apply more than twice per year.

## **CROP:**

Golf Courses (roughs and fairways only), sod farms

## **APPLICATION TIME:**

This product is only effective when applied to the leaves of actively growing weeds. This product will not prevent new weeds—apply only when weeds are present. If weed populations do not warrant a broadcast application (e.g., entire turf area), consider spot treatments that target only weedy areas. This product is designed to target treatment of weedy areas of turf. This product may injure desirable ornamentals and vegetables.

Apply at a time of rapid growth, usually May, June and/or September, before grasses are in the flag-leaf (shot blade) stage.

Spray thoroughly using 100 to 300 litres of water per hectare.

Do not use on bentgrass or newly seeded areas.

Avoid mowing for several days before and after treatment.

Do not apply if rainfall is expected, or irrigating, within 24 hours.

Applications while plants are under stress, such as during hot, cold or drought conditions, will increase risk of damage to turf and can result in reduced weed control.

Use caution when spraying near sensitive desirable vegetation.

Do not allow people (other than the applicator) or pets onto the treatment area during application.

Do not enter treated areas until spray has thoroughly dried.

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray

droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification.

### **METHOD:**

DO NOT apply by air. Ground application only.

# **MAXIMUM APPLICATION FREQUENCY:**

DO NOT apply more than two broadcast applications per season. This does not include spot treatments.

# **RECOMMENDED RATE PER HECTARE:**

Up to 1.9 L at each application.

Up to 3.8 L per year, total.

Do not apply more than twice per year.

# CONTROL OF WOODY GROWTH IN NON-GRAZED AREAS:

Apply at time of rapid growth, usually May, June and/or September.

Apply 3.25 to 6.8 litres of product, by ground in 1000 to 3000 litres of water per hectare.

For aerial applications use 55 to 165 litres of spray solution per hectare.

For oil water carrier, use 15 litres of oil mixed in 40 litres of water with continuous agitation.

Use the lower rate for species that are more susceptible such as chokecherry, western snowberry and willow. Do not apply more than twice per year.

Spray brush species up to 3 metres tall after foliage is well developed.

Applications soon after leaves are fully open usually give the best results.

Apply sufficient spray volume to thoroughly wet all plant parts to the ground line.

Brush or trees above 3 metres tall should be cut close to the ground and sprayed when the regrowth is over 0.6 m tall.

With good growing conditions and adequate soil moisture, sprays may be applied up to 2 to 3 weeks before normal frost time.

To reduce potential drift hazard, a drift control agent may be added. Follow directions on the drift control agent label for the correct mixing sequence. Ground or aerial application.

#### BASAL BARK AND STUMP TREATMENT:

Controls hard-to-kill woody brush and young trees.

The solution can be applied to the basal part of standing brush and young trees during any time of the year, prior to formation of corky bark.

To prevent regrowth treat stumps immediately after cutting by spraying or painting stumps, exposed roots and cut surface.

Thorough drenching is essential.

Mix 2.5 L in 100 L of fuel oil. Spray to run-off.

#### **WEEDS CONTROLLED:**

# **Susceptible Weeds:**

Annual sow-thistle, Bluebur (before the 4-leaf stage), Burdock (before the 4-leaf stage), Cocklebur, Daisy fleabane, False flax, False ragweed, Flixweed, Giant ragweed, Goat's-beard, Kochia, Lamb's-quarters, Mustards (except Dog and Tansy), Narrow-leaved hawk's-beard (in fall, and at the 1- to 2-leaf stage in spring), Plantain, Prickly lettuce, Ragweeds, Redroot pigweed, Russian pigweed, Russian-thistle, Shepherd's-purse, Stinging nettle, Stinkweed, Sweet Clover (seedling), Thyme-leaved spurge, Volunteer canola, Wild radish, Wild (prairie) sunflower

## **Rates to Control Susceptible Weeds:**

Small seedlings (2- to 4-leaf), growing rapidly, good growing conditions: 0.5 to 0.8 L/ha. Large weeds, dry or cold weather, heavy infestations: 0.8 L/ha. Resistance increases with age.

#### **Harder-To-Control Weeds:**

Curled dock (apply before 4-leaf stage), Dog mustard, Field pepper-grass, Flixweed (if treated before bolting in spring), Groundsel, Hairy galinsoga, Hawkweed, Heal-all, Knotweed (apply before the 4-leaf stage), Narrow-leaved hawk's-beard (if treated before bolting in spring), Oak-leaved goosefoot, Pineappleweed, Prostrate pigweed, Purslane, Sheep sorrel, Tansy mustard, Tumble pigweed, Velvetleaf.

## **Rates for Harder-To-Control Weeds:**

Small seedlings (2- to 4-leaf), growing rapidly, good growing conditions: 0.9 to 1.3 L/ha. Large weeds, dry or cold weather, heavy infestations: 1.3 L/ha. Resistance increases with age.

# **Very-Hard-to-Control Weeds – Only Top Growth Control Can Be Expected:**

Biennial wormwood, Blue lettuce, Bull thistle, Burdock, Buttercup, Canada thistle, Chicory, Curled dock, Dandelion, Field bindweed, Field chickweed\*, Field horsetail\*, Gumweed, Hedge bindweed, Hemp-nettle\* (if treated before the 4-leaf stage), Hoary cress, Lady's-thumb\*, Leafy spurge, Mouse-eared chickweed\*, Perennial sow-thistle, Russian knapweed, Scentless mayweed, Smartweed\*, Tartary buckwheat, Teasel, Volunteer sunflower, Wild buckwheat\*, Yellow rocket (controlled with applications before 4-leaf stage).

\* Use highest listed rate for suppression.

## **Rates for Top Growth Control of Very-Hard-To-Control Weeds:**

Small seedlings (2- to 4-leaf), growing rapidly, good growing conditions: 1.1 to 1.3 L/ha. Large weeds, dry or cold weather, heavy infestations: 1.3 L/ha. Resistance increases with age.

## CONTROL OF GIANT RAGWEED IN SOYBEAN

# 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 use(s) described below were developed by persons other than Loveland Products Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion Program. Loveland Products Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Loveland Products Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use described below.

#### **DIRECTIONS**:

**Crop:** Soybeans **Pest:** Giant ragweed **Application Time:** 

Pre-emergent to soybean (applied a minimum of 7 days before planting)

Post-emergent to giant ragweed

**Method:** Ground application

**Recommended Rate per Hectare:** 0.5 - 0.8 L/ha

**USE PRECAUTION:** Do not use in sandy soils with less than 1% organic matter. Plant soybean seeds as deep as possible, but not less than 2.5 cm. Adjust planter to ensure adequate coverage of planted seed.

**DO NOT** graze or cut treated crops for forage or hay until 67 days after application. **DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

**Spray Volume:** 50 - 200 L/ha

**Number of Applications:** One per season **Pre-harvest Interval (PHI):** 90 days

**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.

**RESTRICTED USE:** FOREST AND WOODLAND MANAGEMENT NATURE OF RESTRICTION: This product is to be used only in the manner authorized. Consult local pesticide regulatory authorities about use permits that may be required.

**CONIFER RELEASE - AERIAL APPLICATION:** To control undesirable hardwood species in stands of fir, hemlock, spruce and pine regeneration apply SALVO 2,4-D Ester 700 at 3.63 to 4.7 L/ha in 30 to 80 L/ha of total spray mixture. Use water or an "oil-water"\* mixture. Never allow any water or mixture containing water to get into the SALVO 2, 4-D Ester 700 or the oil spray premix. Note: SALVO 2, 4-D Ester 700 in water or oil-water sprays forms an emulsion, not a solution, and separation may take place unless sprays are agitated continuously until used up. Mechanical agitation is recommended.

To prevent conifer damage, delay spraying until all new conifer growth has hardened off, when the terminal buds feel sharp to touch.

Caution should be taken to ensure that the conifer is not in a second phase of active or "lammas" growth in late summer. Hardwoods should not have commenced fall colouration. Control of heavy suckering species such as maple, trembling aspen and balsam poplar may only be partial. Raspberries will not be controlled and may if present proliferate following removal of the hardwood overstory.

**FOREST SITE PREPARATION - AERIAL APPLICATION:** To control mixed hardwood species on sites to be planted to conifers, use 4.7 to 6.78 litres of SALVO 2, 4-D Ester 700 in 30 to 100 litres of total spray mixture per hectare. Apply as a uniform spray when the foliage is well developed and the brush is actively growing. Under conditions of good growth and high soil moisture, sprays can be used 2 to 3 weeks before normal frost time. For best results use a 10% oil-water\* mixture.

**NOTE:** When preparing sites for planting do not plant conifers before spraying as the conifers present at the time of spraying may be injured or killed. To reduce potential drift hazard on non-crop locations, a drift control agent may be added. Follow all directions on the drift control agent label for the correct mixing sequence. Do not apply more than twice per year.

\* To prepare the "oil-water" mixture add the SALVO 2, 4-D Ester 700 to the oil in a separate container. With vigorous agitation 1 litre of SALVO 2, 4-D Ester 700 will emulsify up to 10 litres of oil in 100 litres of spray mixture. Start running the water into the empty spray tank, then slowly add the premix with continuous agitation. All the premix should be in the tank by the time 1/3 of the water is in. If the premix is put in the tank without any water, the first water added may form a thick "invert" (water in oil) emulsion which will be hard to break.

**USE PRECAUTIONS**: With aircraft, uniform coverage can be obtained and drift minimized by using 235 kPa spray pressure or less at the nozzle, by using nozzles directed straight back, by using a spray boom no larger than 3/4 the wing span of the aircraft and by spraying when wind velocity is less than 8 km/h.

# **Generic Aerial Application Label Instructions Directions for Use**

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.

BEFORE AERIAL APPLICATION TO FORESTS – Consult the most recent provincially approved topographic maps of the area to be treated (1:50 000) or more upto-date information (e.g. GPS Systems) to identify sensitive aquatic habitats.

Sensitive aquatic habitats include:

- a) All running (lotic) and standing (lentic) water bodies, including impoundments, beaver ponds and bog ponds, that appear on the map or GPS system;
- b) Running (lotic) and standing (lentic) water bodies that do not appear on the map or GPS system but are visible from the air.

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

#### **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.

# **Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer or obtain technical advice from the distributor or your provincial agricultural representative.