

CAUTION

**KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

***Agro-Essence* GLYPHOSATE 450SL**

**ACTIVE CONSTITUENT: 450g/L GLYPHOSATE
Present as the ISOPROPYLAMINE SALT**

GROUP M HERBICIDE

Water soluble herbicide for non-selective control of most
Perennial and annual weeds in conservation tillage situations.

IMPORTANT: READ THIS LEAFLET THOROUGHLY BEFORE USING THIS PRODUCT



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APVMA Approval Number: 64733/50893

DIRECTIONS FOR USE

Restraints: For best results do not disturb sprayed weeds by cultivation of heavy grazing for one day post spraying of annual weeds or seven days post spraying of perennial weeds.

Avoid spraying if rain is expected within six hours.

Do not apply to weeds under stress.

SITUATION	WEEDS CONTROLLED	BOOM SPRAY RATE VOL/HA	STATE	CRITICAL COMMENTS
For reduced cultivation, seed bed salvage and direct drilling prior to sowing winter crop or pasture. For weed control prior to full disturbance with a cultivation or sowing with a tyned implement	Barley grass, Brome grass, Volunteer cereals, Wild oats	400-800mL pre tillering 800mL-1.0L post tillering	NSW, VIC, SA,WA only (SOUTHERN AUSTRALIA)	<ul style="list-style-type: none"> Apply to actively growing weeds only. Do not spray plants stressed due to low moisture levels, frost disease, waterlogging or covered with dust. Seeding can commence 1 day after spraying for annual weeds and 7 – 10 days for perennial weeds, providing a suitable seed bed condition exists. In grazed situations remove stock to allow 6-8cm re-growth before spraying. If cultivation or sowing does not take place within 21 days repeat treatment may be required. When annual ryegrass is present the addition of Sanwet™ TG1000 (non-ionic surfactant) at 200mL/100L of spray solution may assist control. Use higher rates when: <ol style="list-style-type: none"> Late in the season where grasses reach tillering or where broadleaf weeds reach Stem elongation/budding. Spraying in cold or overcast conditions. Use lower rates on young weeds. NOTE: Barnyard grass and Liverseed grass are particularly prone to moisture stress. Sowing should not proceed until conditions allow formation of a satisfactory seedbed. Where heavy weed growth is present sowing must be delayed until weed decay and soil conditions allow formation of a satisfactory seedbed. Incorporation of green or decaying vegetation into seedbeds via cultivation or sowing may retard crop emergence. In marginal seedbed conditions take care to achieve correct seeding depth.
	Annual phalaris, Annual ryegrass, Silver grass, Winter grass	800mL-1.0L per tillering 1.0-1.2 post tillering.		
	Capeweed, Doublegee Spiny emex (three cornered Jack)	400mL-800mL less than 8 cm diameter,800mL-1L greater than 8cm diameter		
	Amsinkia, Fumitory, Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Variegated thistle, Volunteer lupin., Wild turnip	800mL-1.0L less than 12cm diameter 1.0L-1.2L greater than 12cm diameter		
	Dock (seedling)	800mL-1.2L		
	Perennial phalaris, Sorrel, Sub clover, Soursob	1.2L		
	Skeleton weed-fully emerged rosettes			
	All the above weeds	1.2L-2.4L	TASMANIA ONLY	
Late winter-spring applications Prior to sowing a summer crop or commencement of fallow	Barley grass, Volunteer cereals, Wild oats.	800mL-1.2L	NSW, VIC, SA,WA ONLY (SOUTHERN AUSTRALIA)	
	Annual ryegrass, Brome grass, Silver grass, Capeweed, Paterson's curse (rosette), Saffron thistle, Scotch thistle, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.2L-1.6L		
	All the above weeds	1.2L-2.4L	TASMANIA	

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Prior to sowing winter crop or for weed control in summer fallows	Annual phalaris, Barley grass, Volunteer cereals, Wild oats	500-800mL	QLD, NSW only (NORTHERN AUSTRALIA)	TASMANIA Where perennial weeds are being treated increase rate to 2.4L/ha. Use 1.2L/ha rate on annual weeds. To control clover and improve control of sorrel and dock add Dicamba at label rates. TANK MIXTURES: Read and follow all label directions, restraints, plantback periods, withholding periods and safety directions for the tank mix products. DO NOT apply by aircraft when temperature is above 35°C For instructions on aerial application under hot conditions. see AERIAL APPLICATION.
	Barnyard grass, Liverseed grass, Stinkgrass (Lovegrass). Summer grass, Volunteer sorghum	800mL-1.2L		
	Amaranth, Cudweed, Fumitory, Mexican poppy, New Zealand spinach, Noogoora burr, Saffron thistle, Spear thistle, Spurge, Stinking goosefoot	800mL-1.2L		
	Australian Bluebell		QLD ONLY	
	Mintweed, Variegated thistle, Volunteer Sunflower, Yellowvine (Caltrop)	400-800mL up to 5 true leaves or 3cm diameter height. 800mL - 1.2L greater than 5 true leaves or 3cm diameter/height.	QLD, NSW only (NORTHERN AUSTRALIA)	
	Annual ground cherry (Gooseberry), Camel melon, Bladder ketmia, Sowthistle, (Milk thistle), Turnip weed, Wild lettuce, Wild turnip	800mL-1.2L prior to stem elongation budding. After that use 400mL-1.2L plus 500-700mL 2.4D Ester (800g/L) OR 1.2-1.6 L		
Seed Set Control in Pastures Seed Set Control in Certain Annual Grass Weeds	Annual Ryegrass	360mL	NSW, SA, VIC, TAS ONLY	<ul style="list-style-type: none"> • Annual Ryegrass to be sprayed at flowering. • Use higher rates where Annual Ryegrass is present or where there is dense growth. • Livestock to be removed prior to spraying to allow for even re-growth. • Grasses other than Annual Ryegrass can be sprayed from head emergence to silky dough stage. • Legume seed set will be adversely affected if spraying occurs at flowering or early seed set. • The addition of Sanwet™ TG1000 (non-ionic surfactant) will be required.
	Silver Grass, Barley Grass, Brome Grass	240mL-360mL		

SITUATION	WEEDS CONTROLLED	APPLICATION RATES			STATE	CRITICAL COMMENTS	
		BOOM SPRAY VOL/HA	Handgun per 100L Water	Knapsack per 15L			
Woody and Perennial Weeds in Pasture, Forests and nonagricultural areas. (Spot directed or wiper application is required for selectivity in established pastures and forests)	Bracken		1.2L	180mL	NSW, VIC, SA,QLD, TAS ONLY	<p>Multitrope or feltwick wipers are recommended. Dilute at the rate of 1 part AGRO-ESSENCE GLYPHOSATE 450SL to 3.75 parts of water. For pipewick equipment a double pass application is required.</p> <p>Bracken should be slashed in the water or early spring. Then prior to frosts, apply in March-May to actively growing fronds. It may be necessary to repeat treatment in conjunction with pasture improvement for permanent control.</p>	
	Cocksfoot Flatweed	2.4L	560mL	80mL			Apply at early head stage to actively growing weeds.
	Carpet Grass		400mL	60mL			
	Johnson Grass Nutgrass Sorrel	4.8L	800mL	120mL			<p>For Johnson Grass apply at early stage to actively growing weeds. For nutgrass apply to growing plants in late summer. i.e. February to mid April when at least 20-25% have reached to head stage.</p> <p>Apply in split application 6-8 weeks apart (3L/ha each application). For sorrel apply to actively growing weeds when the majority have reached the early bud stage.</p>

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Woody and Perennial Weeds in Pasture, Forests and nonagricultural areas. (Spot directed or wiper application is required for selectivity in established pastures and forests)	Kikuyu Paspalum	1.1L - 4.8L	800mL	120mL	NSW, QLD, VIC, TAS ONLY	Apply to Paspalum at early head stage. Apply to actively growing weeds. Use the low rate in boomspray column for suppression only. Where complete control is required use 4.8L/ha.
	Water Couch	7.2L	1.0L	160mL		Apply to actively growing weeds in late summer. i.e, February to March and before the onset of frosts. Not more than one quarter of the weed should be submerged at the time of treatment.
	Boxthorn, African		560-800mL	80-120mL		Use the lower rate on young shrubs. Use the higher rate on mature and tall shrubs. • DO NOT spray in dry conditions. • Use of CDA equipment is not recommended. Complete spraying of foliage is essential for total control.
	Blackberry		800mL-1.0L	120-160mL		Should be applied between January-May i.e from flowering to leaf fall. See that plants are not under stress. Use of CDA equipment is not recommended. Complete spraying of foliage cover is essential for total control. Use the higher rate on old, dense infestations over 1.75m high. Visible symptoms may not be fully apparent until the next season. Burning (after complete Burnout), pasture improvement and/or further treatment are recommended to control seedling and/or regrowth.
Orchards including Citrus, Pome and Vineyards (Grapes)	Amaranth, Barnyard Grass, Chickweed, Double Gee, Liverseed Grass, Paterson's Curse, Pigweed, Rye Grass, Spear Thistle, Spiny Burrgrass. Thornapple, Wild Oats, Winter Grass.	1.6-2.4L	400-560mL	60-80mL	NSW, QLD, VIC, SA, TAS only	• DO NOT allow spray to drift on to crop. AGRO-ESSENCE GLYPHOSATE 450SL can be used as a tank mixture with Flowable Simazine formulations for the residual control of annual weeds. This mixture should not be used to control perennial weeds. Apply as directed or shielded spray using selective application equipment. Do not apply as a spray near trees or vines less than 3 years old. Do not allow spray or spray drift to contact green bark or stems, laterals, fresh wounds, foliage or fruit.
	Couch	7.2L	1.0L	160mL		Apply to actively growing weeds at early head stage.

**NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL, UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.
WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.**

GENERAL INSTRUCTIONS:

AGRO-ESSENCE GLYPHOSATE 450SL is a non-selective herbicide in water solution. It is absorbed by plant foliage and green stems and is translocated through the plant from point of contact into the root system. Effects of AGRO-ESSENCE GLYPHOSATE 450SL may not be apparent for 3-7 days (annual weeds) depending on weather conditions, weed species and the herbicide use rate. Some perennial weeds may not show effects for 10-20 days under cool and cloudy conditions. AGRO-ESSENCE GLYPHOSATE 450SL will control emerged weeds only, and provides no residual weed control. It is not recommended to apply AGRO-ESSENCE GLYPHOSATE 450SL just before or after rain. Rainfall occurring up to 6 hours after application may reduce effectiveness. The best result is achieved when weed is actively growing. There is no withholding period for AGRO-ESSENCE GLYPHOSATE 450SL. It is recommended to avoid grazing weeds after weed spraying for 1 day (annual weeds) or 7-10 days (perennial weeds) to allow translocation of this product through the weeds to roots.

RESISTANT WEEDS WARNING:

GROUP	M	HERBICIDE
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AGRO-ESSENCE GLYPHOSATE 450SL Non Selective Herbicide is a member of the Glycines group of herbicides. AGRO-ESSENCE GLYPHOSATE 450SL Non Selective Herbicide has the inhibitors of EPSP synthase mode of action. For weed resistance management AGRO-ESSENCE GLYPHOSATE 450SL Non Selective Herbicide is a group M herbicide.

Some naturally-occurring weed biotypes resistant to AGRO-ESSENCE GLYPHOSATE 450SL Non Selective Herbicide and other group M herbicides may exist through normal generic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by AGRO-ESSENCE GLYPHOSATE 450SL Non Selective Herbicide or other group M herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, AGRO-ALLIANCE (Australia) Pty Ltd. accepts no liability for any losses that may result from the failure of AGRO-ESSENCE GLYPHOSATE 450SL Non Selective Herbicide to control resistant weeds.

MIXING PROCEDURES:

- A. Spray tank should be free of any previous spray chemicals.
- B. Half fill spray tank with clean water, add required amount of AGRO-ESSENCE GLYPHOSATE 450SL, then fill with clean water. Add Sanwet™ TG1000 (non-ionic surfactant) last. Muddy water used for AGRO-ESSENCE GLYPHOSATE 450SL dilution may reduce effectiveness.
- C. Agitate well before spraying, avoid excessive foaming.
- D. When tank mixing with other compatible chemicals add this product after other water soluble products but before flowables e.g. Striker™ (flowable diuron).

IMPORTANT: Store AGRO-ESSENCE GLYPHOSATE 450SL in original closed containers or other plastic lined containers, aluminium, brass, copper, stainless steel or fibreglass containers. The contact of AGRO-ESSENCE GLYPHOSATE 450SL with unlined or galvanised steel may produce hydrogen, a highly flammable gas causing a potential explosion if ignited by open flame sparks and any other ignition source. The direct contact or drift of AGRO-ESSENCE GLYPHOSATE 450SL on any growing crop, plants or trees may result in irreversible injury and destruction.

SURFACTANT ADDITION:

The addition of Sanwet™ TG1000 (non-ionic surfactant) is recommended with this product at the ratio 300mL/100L of tank solution or higher for diluted surfactant. (Read agricultural surfactant label before use). Add Sanwet™ TG1000 (non-ionic surfactant) at rate 200mL/100 litres spray solution when treating Annual Ryegrass, Silvergrass and Perennial grasses. Use Sanwet™ TG1000 (non-ionic surfactant) only when recommended.

TANK MIXTURES:

AGRO-ESSENCE GLYPHOSATE 450SL can be tank mixed with Lasher™ (chlorsulfuron) in fallow or pre-sowing, to provide knockdown and residual control. Observe respective label for Directions For Use and crop rotation recommendations. AGRO-ESSENCE GLYPHOSATE 450SL and 2, 4-D ESTER may be tank mixed for improved control of certain broadleaf weeds. Observe any regional restrictions, plant back periods and cautions appearing on 2, 4-D ESTER label. AGRO-ESSENCE GLYPHOSATE 450SL can be tank mixed with DICAMBA 200 for improved control of Sorrel, Sub-clover, Medics and White clover. Observe any regional restrictions, plant back periods and cautions on DICAMBA 200 label.

ATRAZINE/SIMAZINE:

For knockdown and residual control AGRO-ESSENCE GLYPHOSATE 450SL can be tank mixed with either Flowable Simazine or Flowable Atrazine. Observe Directions of Use table and crops suitable on the respective labels. When tank mixing these products the addition of a crystalline ammonium sulphate is recommended (to avoid antagonism) at a rate of 2kg/100L spray solution. Use only crystalline ammonium sulphate not prilled or granulated product. Check ammonium sulphate solubility by dissolving 2 tablespoons in 2 litre of water. DO NOT apply tank mix by air.

WARNING: Mixtures of this product and atrazine do not control barnyard grass.

APPLICATION:

A. BOOM EQUIPMENT: A spray volume of 25-120L/ha is recommended. Ensure a double overlap of nozzle patterns at the top of the weed canopy.

NOTE: Fan nozzle equipment should be used, at pressures in the range of 240-280kPa.

B. AERIAL APPLICATION: AGRO-ESSENCE GLYPHOSATE 450SL may be aerially applied in pasture or fallow situations prior to establishment of field crops, fodder crops or new pasture. Apply in spray volumes of 15-80L per hectare. Increased spray volumes should be used in difficult situations such as mountainous areas and hilly terrains. This will ensure adequate crop coverage. DO NOT use in intensive horticultural areas. APPLICATION PROCEDURE IN HOT CONDITIONS: It is recommended that when the temperature reaches 24oC to 26oC, increase water volume to at least 30-35L/ha and increase droplet size to at least 300 micron VMD. Aerial application is not recommended at temperatures above 35°C. DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures.

WASHING AND CLEANING OF EQUIPMENT:

Take careful precautions with regard to the washing of all spray equipment after each day of spraying. Using clean water, wash spray tank, nozzles, pumps, etc. Aircraft should be thoroughly washed, especially landing gear, after each day of spraying. Spray tanks, pumps, lines and nozzles should be thoroughly rinsed with clean water following application to prevent corrosion.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT:

DO NOT contaminate dams, waterways, streams or rivers with the chemical or used containers. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water.

PROTECTION OF CROPS, NATIVE AND OTHER NON TARGET PLANTS:

1. AGRO-ESSENCE GLYPHOSATE 450SL contact with desirable plants, trees and adjacent crops can cause severe damage or destruction.
2. DO NOT spray in conditions conducive to spray drift.
3. DO NOT apply under meteorological conditions or from spraying equipment which would be expected to cause spray to drift onto nearby susceptible plants and adjacent crops.

The direct contact or drift of AGRO-ESSENCE GLYPHOSATE 450SL on any growing crop, plants or trees may result in irreversible injury and destruction.

STORAGE AND DISPOSAL:

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight, Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemical on-site. If recycling replace cap and return clean containers to recycler or designated collection point. If not recycling, break crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

REFILLABLE CONTAINERS(1000L):

Empty contents fully into application equipment.

Close all valves and return to point of sale for refill or storage.

SAFETY DIRECTIONS:

Product will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing product for use wear elbow-length PVC gloves and face shield or goggles. When using controlled droplet applicator wear protective waterproof clothing and impervious footwear. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing, gloves, goggles or face shield.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 131126

MATERIAL SAFETY DATA SHEET (MSDS):

Additional information is listed in the Material Safety Data Sheet (Agro-Alliance MSDS).

LIMIT OF WARRANTY AND LIABILITY:

AGRO-ALLIANCE (AUSTRALIA) PTY LTD. warrants that AGRO-ESSENCE GLYPHOSATE 450SL conforms to chemical description on the label and it is of merchantable quality.

The use of AGRO-ESSENCE GLYPHOSATE 450SL being beyond the control of the manufacturer, no warranty expressed or implied is given by AGRO-ALLIANCE (AUSTRALIA) PTY LTD regarding its suitability, fitness of efficiency for any other purpose for which it is used by the buyer, whether in accordance with the directions or not and AGRO-ALLIANCE (AUSTRALIA) PTY LTD accepts no responsibility for any consequence whatsoever resulting from the use of this product.

In case of emergency: Phone 1800 033 498