

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

LIFT
HERE
←

SANOS 450

NON SELECTIVE HERBICIDE BY SANONDA

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 THE ATTACHED
BOOKLET BEFORE USING PRODUCT**

APVMA Approval No.: 47204/0310



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GENERAL INSTRUCTIONS:

SANOS 450 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 SANOS 450 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. SANOS 450 will control emerged weeds only, and provides no residual weed control. It is not recommended to apply SANOS 450 just before or after rain. Rainfall occurring up to six hours after application may reduce effectiveness. The best result is achieved when weed is actively growing. There is no withholding period for SANOS 450. It is recommended to avoid grazing weeds after spraying for one day (annual weeds) or 7-10 days (perennial weeds) to allow translocation of this product through foliage to roots.

RESISTANT WEEDS WARNING: GROUP M HERBICIDE

SANOS 450 Non Selective Herbicide is a member of the Glycines group of herbicides. SANOS 450 Non Selective Herbicide has the inhibitors of EPSP synthase mode of action. For weed resistance management SANOS 450 Non Selective Herbicide is a group M herbicide. Some naturally-occurring weed biotypes resistant to SANOS 450 Non Selective Herbicide and other inhibitors of EPSP synthase herbicides may exist through normal genetic 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 SANOS 450 Non Selective Herbicide or other inhibitors of EPSP synthase herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Sanonda (Australia) Pty. Ltd. accepts no liability for any losses that may result from the failure of SANOS 450 Non Selective Herbicide to control resistant weeds.

MIXING PROCEDURES:

- A. Spray tank should be free of any previous spray chemicals. Sanonda Tank & Equipment Cleaner (suitable tank cleaning agent) is recommended.
- B. Half fill spray tank with clean water, add required amount of SANOS 450, then fill with clean water. Add Sanwet™ TG1000 (non-ionic surfactant) last. Muddy water used for SANOS 450 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 eg Striket™ (flowable diuron).

IMPORTANT: Store SANOS 450 in original closed containers only. The contact of SANOS 450 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 SANOS 450 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/100L spray solution when treating Annual Ryegrass, Silvergrass and Perennial grasses. Use Sanwet™ TG1000 (non-ionic surfactant) only when recommended.

TANK MIXTURES:

SANOS 450 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.

SANOS 450 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.

SANOS 450 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 SANOS 450 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 two tablespoons in two litres 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: SANOS 450 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/ha. 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 24°C to 26°C, 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, CRUSTACEA and ENVIRONMENT:

DO NOT contaminate waterways, streams or rivers with the chemical or used containers.

PROTECTION OF CROPS, NATIVE AND OTHER NON TARGET PLANTS:

1. SANOS 450 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 SANOS 450 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 dry, cool, well-ventilated area out of direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals 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 500 mm 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.

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, 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 gloves, face shield or goggles and contaminated clothing.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800764 766

DIRECTIONS FOR USE

Restraints:

For best results do not disturb sprayed weeds by cultivation or 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	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 regrowth before spraying If cultivation or sowing does not take place within 21 days repeat treatment may be required. <p>• Where Annual ryegrass is present the addition of Sanwet™TG1000 (non-ionic surfactant) at 200mL/100L of spray solution may assist control.</p> <ul style="list-style-type: none"> 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 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. <p style="text-align: right;">to be continued</p>
	Annual phalaris, Annual ryegrass, Silver grass, Winter grass	800mL-1.0L pre tillering 1.0-1.2L post tillering.		
For weed control prior to full disturbance with a cultivation or sowing with a tyned implement	Capeweed, Doublegee (Spiny emex, three cornered jack)	400-800mL less than 8cm diameter 800mL-1.2L greater than 8cm diameter		
	Amsinckia, Fumitory Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Variegated thistle, Volunteer lupins, 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		NSW ONLY	
	All the above weeds	1.2-2.4L	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)	

SITUATION	WEEDS CONTROLLED	BOOM SPRAY RATE VOL/HA	STATE	CRITICAL COMMENTS
Late Winter-Spring applications prior to sowing a Summer crop or commencement of fallow	Annual ryegrass, Brome grass, Silver grass, Capeweed, Paterson's curse (rosette), Saffron thistle, Scotch thistle, Spear thistle, Wild mustard, Wild radish, Wild turnip	1.2-1.6L	NSW, VIC, SA, WA ONLY (SOUTHERN AUSTRALIA)	<p>TASMANIA</p> <p>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.</p> <p>TANK MIXTURES: Read and follow all label directions, restraints, plantback periods, withholding periods and safety directions for the tank mix products.</p>
	All the above weeds	1.2-2.4L	TASMANIA ONLY	
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)	<p>DO NOT apply by aircraft when temperature is above 35°C. For instructions on aerial application under hot conditions. See AERIAL APPLICATION.</p>
	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)	

SITUATION	WEEDS CONTROLLED	BOOM SPRAY RATE VOL/HA	STATE	CRITICAL COMMENTS
Prior to sowing Winter crop or for weed control in Summer fallows	Annual ground cherry (Gooseberry), Carnel 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 1.2-1.6L	QLD, NSW ONLY (NORTHERN AUSTRALIA)	As Above
Seed Set Control in Pastures, Seed Set Control of 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 regrowth. 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 earlyseed set. The addition of Sanwet™ TG1000 (non-ionic surfactant) will be required.
	Silver grass, Barley grass, Brome grass	240-360mL		

SITUATION	WEEDS CONTROLLED	APPLICATION RATES			STATE	CRITICAL COMMENTS
		BOOMSPRAY per Ha	Handgun per 100L Water	Knapsack per 15L		
Woody and perennial weeds in pastures, forests and non-agricultural 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	Multirope or feltwick wipers are recommended. Dilute at the rate of 1 part SANOS 450 to 3.75 parts of water. For pipewick equipment a double pass application is required. Bracken should be slashed in the winter 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.
	Cocksfoot, Flatweed	2.4L	560mL	80mL		
	Carpet grass		400mL	60mL		For Johnson grass apply at early head 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. 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.
	Johnson grass, Nutgrass, Sorrel	4.8L	800mL	120mL		
	Kikuyu, Paspalum	1.1-4.8L	800mL	120mL		
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.		

SITUATION	WEEDS CONTROLLED	APPLICATION RATES			STATE	CRITICAL COMMENTS
		BOOMS PRAY per Ha	Handgun per 100L Water	Knapsack per 15L		
Woody and perennial weeds in pastures, forests and non-agricultural areas. (Spot directed or wiper application is required for selectivity in established pastures and forests)	African boxthorn		560-800mL	80-120mL	NSW, QLD, VIC, TAS ONLY	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 seedlings and/or regrowth. In Tasmania do not treat bushes bearing mature fruit, or near mature fruit.
Orchards including Citrus, Pome and Vineyards (Grapes)	Amaranth, Barnyard grass, Chickweed, Doublegee, Liverseed grass, Paterson's curse, Pigweed, Rye grass, Spear thistle, Spiny burgrass, 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. SANOS 450 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

LIMIT OF WARRANTY AND LIABILITY:

SANONDA (AUSTRALIA) PTY. LTD. warrants that SANOS 450 conforms to chemical description on the label and it is of merchantable quality.

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



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