Product Name: Alion 500 SC Herbicide
APVMA Approval No: 92296/138632

RLP
APPROVED

Label Name:	Alion 500 SC Herbicide
Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 500 g/L INDAZIFLAM
Mode of Action:	GROUP 29 HERBICIDE
Statement of Claims:	For pre-emergent control of certain grass and broadleaf weeds in almond and citrus orchards and vineyards and along agricultural fence lines as per the Directions for Use.
Net Contents:	1 L - 1000 L
Restraints:	This section contains file attachment.
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	WITHHOLDING PERIODS HARVEST (H) ALMOND, CITRUS, GRAPES: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION

	GRAZING (G) DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION

Trade Advice:	TRADE ADVICE LIVESTOCK DESTINED FOR EXPORT MARKETS The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, the export slaughter interval is observed before stock are sold or slaughtered. EXPORT SLAUGHTER INTERVAL (ESI) – 3 DAYS Livestock that has grazed on treated areas should be placed on clean feed for 3 days prior to slaughter.

General Instructions:	This section contains file attachment.

Resistance Warning:	RESISTANT WEEDS WARNING GROUP 29 HERBICIDE Alion 500 SC Herbicide is a member of the Group 29 herbicides (alkylazines) and has the inhibitor of cell wall [cellulose] synthesis mode of action. For weed resistance management Alion is a Group 29 herbicide. Some naturally occurring weed biotypes resistant to Alion, and other Group 29 herbicides, may exist through normal genetic variability in any weed population. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by Alion or other Group 29 herbicides. DO NOT rely exclusively on Alion for weed control. Use as part of an integrated weed management program involving herbicides with other modes of action and non-chemical methods of control. Since occurrence of resistant weeds is difficult to detect prior to use Bayer CropScience Pty Ltd accepts no liability for any losses that may result from the failure of Alion to control resistant weeds.

Precautions:	

Protections:	PROTECTION OF LIVESTOCK DO NOT allow poultry to graze treated areas or feed grass clippings from any treated area to poultry. PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS DO NOT use clippings from treated areas for mulch around vegetables or fruit trees. PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers. To reduce runoff from treated areas, avoid application to areas with moderate to steep slopes. Runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Storage and Disposal:	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-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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product. DO NOT re-use empty container for any other purpose.

Safety Directions:	SAFETY DIRECTIONS May irritate the eyes. Avoid contact with eyes. When opening the container and preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). Wash hands after use. After each day's use, wash contaminated clothing.

First Aid Instructions:	FIRST AID If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

First Aid Warnings:	

DIRECTIONS FOR USE

RESTRAINTS

DO NOT apply by aerial spraying.

DO NOT apply with a nozzle height greater than 50 cm above the ground.

DO NOT apply through any type of irrigation equipment.

DO NOT irrigate to the point of runoff for at least 3 days after application.

DO NOT apply to waterlogged soil.

DO NOT apply if heavy rains or storms are forecast within 3 days.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift.

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

Spray droplets not smaller than a COARSE spray droplet size category.

Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.

Buffer zones for boom sprayers

Application rate	Boom height above the target canopy	Mandatory downwind buffer zones				
		Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
150 mL/ha or lower	0.5 m or lower	0 m	30 m	0 m	55 m	0 m

DIRECTIONS FOR USE

CROP OR SITUATION	WEEDS CONTROLLED	RATE	WHP	CRITICAL COMMENTS
Almond and citrus orchards, vineyards	Various broadleaf weeds and grasses. Refer to **WEEDS CONTROLLED** in the **GENERAL INSTRUCTIONS.**	50 - 150 mL/ha	14 days (H) 7 days (G)	Alion may be applied to the soil as a uniform broadcast or band application for the prevention of new weed emergence. Do not exceed 100 mL/ha (applied as a broadcast application to the total orchard/vineyard area) or 150 mL/ha (sprayed area when applied as a band application between the rows) in any 12-month period. Apply prior to weed emergence. For control of emerged weeds, use in combination with a knockdown or other post emergent herbicide. To optimise weed control, ensure uniform application of the soil surface and avoid cultivation or other methods of soil disturbance after herbicide application. Use the higher rate (150 mL/ha) in the first year of use and also in subsequent years if weed pressure is high and extended residual control is required. Use a lower rate (e.g., 50 to 100 mL/ha) in subsequent years if weed pressure is low and/or shorter residual control is required. Refer to important **CROP SAFETY** information in the **GENERAL INSTRUCTIONS**.
Agricultural fence lines		150 mL/ha	7 days (G)	Apply prior to weed emergence. For control of emerged weeds, use in combination with a knockdown or other post emergent herbicide. To optimise weed control, ensure uniform application of the soil surface and avoid cultivation or other methods of soil disturbance after herbicide application. Do not exceed 150 mL/ha (sprayed area) in any 6-month period.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION

GENERAL INSTRUCTIONS

Alion 500 SC Herbicide is a selective, pre-emergent herbicide for control of certain grass and broadleaf weeds in almond and citrus orchards, vineyards and agricultural fence lines. Alion controls weeds by reducing the emergence of seedlings through inhibition of cellulose biosynthesis (CB inhibitor). For maximum activity against germinating weeds, Alion needs to reach the soil surface and be activated by rainfall or adequate soil moisture prior to weed emergence. Alion requires sufficient rainfall (minimum 6 mm) after application to activate the herbicide. Control may be reduced if there is insufficient soil moisture to ensure uptake of Alion by germinating weeds prior to weed emergence.

The level of weed control is dependent on many variables including soil texture, moisture, temperature, the amount of vegetation present at the time of treatment, weed species present, the amount of weed seed present in the soil, and the nature of the crop canopy. Weed control activity may be reduced if the application is made to soil covered in heavy crop or weed debris that prevents a uniform distribution of the product reaching the soil. Removing debris prior to application will facilitate contact with soil.

Alion has minimal post-emergent activity and generally does not control weeds that have emerged. A registered post-emergent herbicide may be mixed with Alion to control existing weeds. Refer to the Compatibility section of this label. Alion does not control tubers, rhizomes and woody vegetation.

CROP SAFETY

Apply to trees and grapevines that have been established for a minimum of three years after transplanting and are exhibiting normal growth and good vigour.

Application of Alion in sandy soils or soils that have open channels or cracks in the soil surface may allow for downward movement of the product into the root zone and cause crop damage. Avoid use in intensively draining soils (stony or gravelly with large pores or very sandy soil with low organic matter and clay content) or cracked clay soils, where rapid movement to plant roots may take place.

Do not apply on soil with gravel content greater than 20%.

Do not apply in vineyards grown on soil classified as sand (>85% sand).

Do not apply to soils that have open channels or cracks in the soil surface, or heavily composted soils where tree roots have grown close to the surface or into the composted area (direct contact with the crop roots must be avoided).

Do not apply in flood-irrigated orchards or vineyards.

Do not apply where trees or vines are stressed (exhibit low vigour or poor health).

Do not apply to trunks unless fully callused or protected with a physical barrier (mature brown bark may be sprayed with Alion).

Avoid contact with green bark, foliage and fruit.

Individual replants: Individual trees and grapevines may be planted anytime following an application of Alion, if the treated soil is removed from the transplant hole and soil that has not received any application of Alion within the last 12 months is used around the roots of the new transplant.

MIXING

Ensure that the spray tank has been thoroughly cleaned from previous use before mixing. Half-fill the spray tank with clean water (do not use hard/saline water or water with suspended solids), then with agitators in motion, add the correct amount of Alion directly into the spray tank. Complete filling the tank with water with agitators in motion. Agitation must continue before and during spraying. See COMPATIBILITY section for information on mixing with other products.

APPLICATION

Ensure spraying equipment is properly calibrated before use. Uniform application is essential for satisfactory weed control. Ensure that complete and even spray coverage is achieved. Where application is from both sides of the crop row or fence line the application should aim to have sufficient overlap of the spray to ensure complete coverage of the weeds in the crop row or fence line.

Use spray volumes of 150 – 400 L/ha, spray boom height and spray pressures as low as practical, use coarse droplet-producing nozzle tips, use drift-control additives and spray when wind speed is low.

Apply Alion with a properly calibrated sprayer according to the manufacturers' directions and check periodically to be certain that the equipment is working properly prior to each use. Uniform application is essential for satisfactory weed control. Shut off spray boom while starting, turning or stopping to avoid off-target application.

SPRAYER CLEAN UP

The sprayer must be thoroughly decontaminated before being used again to spray susceptible plants or turf. Ensure that the following operation is carried out in an area that is clear of waterways, desirable vegetation and tree roots, and preferably in an area where drainings can be contained.

1. Drain sprayer completely and wash out tank, boom and hoses with clean water.
2. Drain again.
3. Fill the tank with clean water and add 300 mL of chlorine bleach (containing 4% chlorine) per 100 L of water with agitation running.
4. Flush some bleach solution through booms and hoses and allow remainder to agitate in tank for 10 minutes.

5. Remove nozzles and filters and leave to soak in a bleach solution of 500 mL per 10 L of water while tank cleaning is in progress.
6. Briefly run the pump at periodic intervals to refresh chlorine solution in spray lines.
7. Drain tank and repeat the procedure of flushing with bleach solution.
8. Flush the tank, boom and hoses with clean water.

RE-CROPPING INTERVAL

Alion is intended for use in perennial tree and vine crops listed on this label. Do not rotate with annual crops or crops not listed on this label within 24 months after the last application. Planting earlier than this time may result in crop injury or death. After 24 months from last application of Alion, a bioassay should be conducted prior to planting annual crops or crops not listed on this label. A successful field bioassay means growing a test strip or several plots of the intended crop from seed or transplant to maturity without any observed herbicide symptoms. The test should be conducted in representative areas across the field that includes knolls, low areas, field edges, and changes in soil texture. Response to the field bioassay will indicate whether to plant the species grown in the test strips. If no injury, (such as poor germination, stunting, chlorosis, malformation or necrosis) the species grown in the test strips may be planted. The rotational crop interval must be extended if the field bioassay does not result in acceptable crop tolerance.

WEEDS CONTROLLED

Common name	Scientific name
Amaranth	*Amaranthus* spp.
Annual ryegrass	*Lolium rigidum*
Asthma weed	*Euphorbia hirta, Euphorbia hyssopifolia*
Awnless barnyard grass, barnyard grass, cockspur grass	*Echinochloa* spp.
Barley grass	*Hordeum leporinum*
Billygoat weed, blue billygoat weed	*Ageratum houstonianum, Ageratum conyzoides*
Bindii	*Soliva sessilis*
Birdsfoot trefoil	*Lotus corniculatus*
Black pigweed	*Trianthema portulacastrum*
Blackberry nightshade, glossy nightshade	*Solanum nigrum, Solanum americanum*
Bristle mallow	*Modiola caroliniana*
Brome grass, soft brome	*Bromus* spp.
Burr medic	*Medicago polymorpha*
Caltrop	*Tribulus terrestris*
Canadian fleabane, fleabane	*Conyza* spp., *Erigeron* spp.
Capeweed	*Arctotheca calendula*
Catsear, flatweed, dandelion	*Hypochaeris radicata, Taraxicum officinale*
Chickweed	*Stellaria media*

Common name	Scientific name
Clammy goosefoot	*Dysphania pumilio*
Clover, white clover	*Trifolium* spp.
Cobbler's pegs, blackjack	*Bidens pilosa*
Common sida	*Sida rhombifolia*
Cress weed	*Rorippa* sp.
Crowsfoot grass, wiregrass	*Eleusine indica*
Cudweed	*Gnaphalium* spp., *Gamochaeta* spp.
Curly dock	*Rumex crispus*
Deadly nightshade	*Atropa belladonna*
Dwarf jo-jo	*Soliva anthemifolia*
Fat hen	*Chenopodium album*
Feathertop Rhodes grass	*Chloris virgata*
Guinea grass	*Megathyrsus maximus*
Hairy panic, panic grass	*Panicum effusum*
Heliotrope, clasping heliotrope	*Heliotropium amplexicaule, Heliotropium europaeum*
Indian hedge mustard	*Sisymbrium orientale*
Jersey cudweed	*Helichrysum luteoalbum*
Knobby club rush	*Ficinia nodosa*
Lovegrass	*Eragrostis* spp.
Marshmallow, mallow, cheese weed	*Malva* spp.
Morning glory	*Ipomoea* spp.
Mossman river grass	*Cenchrus echinatus*
Pale pigeon grass	*Setaria pumila*
Panic veldt grass	*Ehrharta erecta*
Paspalum	*Paspalum dilatatum*
Paterson's curse	*Echium plantagineum*
Plantain	*Plantago* spp.
Purslane, pink purslane, pigweed	*Portulaca oleracea, Portulaca pilosa*
Scotch thistle	*Onopordum acanthium*
Silvergrass	*Vulpia bromoides*
Silvery hair grass	*Aira cupaniana*
Sorrel	*Rumex acetosella*
Sowthistle, milk thistle	*Sonchus oleraceus*
Spear thistle	*Cirsium vulgare*
Speedwell	*Veronica persica*
Storksbill, blue storksbill	*Erodium cicutarium, Erodium crinitum*
Summer grass, crabgrass, tropical finger grass, hairy finger grass	*Digitaria* spp.
Sweet signal grass	*Moorochloa eruciformis*
Sweet vernal grass	*Anthoxanthum odoratum*
Tall sedge	*Carex appressa*
Thickhead	*Crassocephalum crepidioides*
Toad rush	*Juncus bufonius*
Vasey grass	*Paspalum urvillei*
White eye	*Richardia brasiliensis*
Wild oats	*Avena fatua*

Common name	Scientific name
Wild radish	*Raphanus raphanistrum*
Wild turnip	*Brassica rapa*
Windmill grass	*Chloris truncata*
Winter grass	*Poa annua*
Wireweed, knotgrass, knotweed	*Polygonum aviculare*
Yorkshire fog, fog grass	*Holcus lanatus*