

# POISON

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

**TITAN**

# AMINE 475

## HERBICIDE

ACTIVE CONSTITUENT: 475g/L 2,4-D present as the DIMETHYLAMINE + DIETHANOLAMINE SALTS

GROUP **4** HERBICIDE

For the control of emerged broadleaved weeds prior to sowing crops and pastures in conservation tillage situations and for selective weed control in crops and situations as per directions for use table.

Formulated for use with glyphosate products.

This is a PHENOXY HERBICIDE that can cause severe damage to native vegetation and susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.

APVMA Approval No.: 64433/128081

Pack Size: 20L; 110L; 1000L



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IN A TRANSPORT EMERGENCY  
**DIAL 000**  
POLICE OR FIRE BRIGADE

TRANSPORT AND HANDLING  
NOT A DANGEROUS GOOD  
ACCORDING TO THE AUSTRALIAN  
DANGEROUS GOODS (ADG) CODE  
FOR TRANSPORT BY ROAD AND RAIL

## DIRECTIONS FOR USE

**Restraints:** DO NOT apply by spraying equipment carried on the back of the user (Manually pressurised backpack sprayer).  
DO NOT apply by aircraft at rates exceeding 3.4L/ha (1620g 2,4-D/ha).  
DO NOT apply by hand-held spraying equipment at rates exceeding 6.9L/ha or 690mL/100L.  
DO NOT use open mixing/loading equipment if treating more than 50 hectares in one day.  
DO NOT exceed maximum application rate of 9.5L/ha (4500g ae/ha).  
DO NOT apply if heavy rains or storms are forecast within 3 days.  
DO NOT irrigate to the point of run-off for at least 3 days after application.  
DO NOT apply if crop or weeds are stressed due to dry or excessively moist conditions.

Additional USAGE restrictions apply in some crops, states and seasons, see restriction tables 1, 2, 3, 4 and 5.

Table 1: Timing restrictions for spraying Peanuts			
Situation	Rate (L/ha)	Region	Timing Restriction
			<b>DO NOT APPLY DURING THE MONTHS</b>
Broadcast spraying, prior to sowing (Peanuts)	Up to 1.8L/ha	Cape York	October and November
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	No timing restrictions
		Burdekin	October
		Mackay/Whitsunday	September to December
		Mary/Burnett	October to November
		SE Queensland	August to May
	Up to 2.2L/ha	Cape York	October and November
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	No timing restrictions
		Burdekin	October
		Mackay/Whitsunday	August to December
		Mary/Burnett	September to November
		SE Queensland	Use not supported
Band spraying, post-sowing pre-emergence (Peanuts)	Up to 2.3L/ha	Queensland dryland	No timing restrictions
		Cape York	No timing restrictions
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	No timing restrictions
		Burdekin	No timing restrictions
		Mackay/Whitsunday	No timing restrictions
		Mary/Burnett	No timing restrictions
		SE Queensland	October to January
Broadcast spray, post-sowing pre-emergence (Peanuts)	Up to 4.7L/ha	Queensland dryland	June to August
		Cape York	October and November
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	October to December
		Burdekin	September and October
		Mackay/Whitsunday	August to December
		Mary/Burnett	April to January
		SE Queensland	Not supported

Table 2: Application and timing restrictions for application to pastures					
DO NOT apply above maximum rate (L/ha) below OR label rate, whichever is LOWEST.					
	State	Summer	Autumn	Winter	Spring
Pastures (prior to sowing, conservation tillage)	Queensland & NT	6.7	6.7	6.7	6.7
	New South Wales & ACT	6.7	6.7	6.7	6.7
	Victoria	0.7	2.2	6.7	2.2
	Tasmania	0.7	1.6	4.7	2.2
	South Australia	1.5	2.2	6.7	4.7
	Western Australia	2.2	4.7	6.7	4.7
	State	Summer	Autumn	Winter	Spring
Pastures (established)	Queensland & NT	9.5	9.5	9.5	9.5
	New South Wales & ACT	9.5	9.5	9.5	9.5
	Victoria	1.3	2.5	9.5	4.7
	Tasmania	0.9	2.2	6.7	4.2
	South Australia	1.9	4.2	9.5	6.7
	Western Australia	4.7	6.7	9.5	6.7

Table 3: Timing restrictions for spraying Sugarcane		
Rate (L/ha)	Region	Timing Restriction
		<b>DO NOT APPLY DURING THE MONTHS</b>
Up to 2.3L/ha	Wet Tropics	No timing restriction
	Burdekin	No timing restriction
	Mackay/Whitsunday	October to November
	Mary/Burnett	October to November
	Northern NSW	No timing restriction
Up to 4.7L/ha	Wet Tropics	October to December
	Burdekin	September to October
	Mackay/Whitsunday	August to December
	Mary/Burnett	April to January
	Northern NSW	October to November

Table 4: Application restrictions for Turf		
DO NOT apply above maximum rate (L/ha) below OR label rate, whichever is LOWEST.		
	State	Rate (L/ha)
TURF	Queensland & NT	4.2
	New South Wales & ACT	4.2
	Victoria	3.3
	Tasmania	3.3
	South Australia	3.3
	Western Australia	5.3
If applying to golf courses in Tasmania, DO NOT apply to fairways adjacent to natural water bodies.		

Table 5: Risk mitigation measures for Dryland cropping, pre-emergent uses	
Situation	Risk mitigation measures
Dryland cropping, Preparatory spray	Only apply in no-till farming systems (Tasmania, South Australia)
Winter cereals, pre-emergence uses	Only apply in no-till farming systems (Tasmania, South Australia, Western Australia)
Summer cereals, pre-emergent uses	Only apply in no-till farming systems (Tasmania, South Australia)

### SPRAY DRIFT RESTRAINTS

DO NOT apply by a vertical sprayer

Specific definitions for terms used in this section of the label can be found at [www.apvma.gov.au/spraydrift](http://www.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 tables 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 or two hours after sunrise.

### BOOM SPRAYERS

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

- Spray droplets not smaller than a VERY COARSE **spray droplet size category**.
- Minimum distances between the **application site** and downwind **sensitive areas** (see 'Mandatory downwind buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.

Buffer Zones for Boom Sprayers						
Application rate (/ha)	Boom Height above target canopy	Mandatory buffer zones (distances given in metres)				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 1.5L (713g ae/ha)	0.5m or lower	0 metres	20	0 metres	15	0 metres
	1.0m or lower		45		45	
Up to 2.5L (1188g ae/ha)	0.5m or lower		30		25	
	1.0m or lower		60		60	
Up to 4.8L (2280g ae/ha)	0.5m or lower		40		35	
	1.0m or lower		110		110	
Up to 5.7L (2708g ae/ha)	0.5m or lower		45		40	
	1.0m or lower		130		130	

### AIRCRAFT

DO NOT apply by aircraft unless the following requirements are met:

- Spray droplets not smaller than a Very Coarse **spray droplet size category**.
- For maximum release height above the target canopy of 3 metres or 25 per cent of wingspan or 25 per cent of rotor diameter, whichever is the greatest, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for aircraft') are observed.

BUFFER ZONES FOR AIRCRAFT						
Application rate (/ha)	Aircraft Type	Mandatory buffer zones (distances given in metres)				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 750mL (356g ae/ha)	Fixed Wing	0 metres	85	0 metres	130	0 metres
	Helicopter		65		90	
Up to 1.5L (713g ae/ha)	Fixed Wing		140		200	
	Helicopter		100		140	
Up to 2.5L (1188g ae/ha)	Fixed Wing		200		300	
	Helicopter		140		190	
Up to 3.4L (1620g ae/ha)	Fixed Wing		240		400	
	Helicopter		160		240	

**Table 1. Pre-sowing: FALLOWS, STUBBLE SPRAY PRIOR TO DIRECT DRILLING OR SOWING**

CROP	TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS
Balansa Clover, Barley, Chickpeas, Cotton, Faba Beans, Field Peas, Lentils, Linseed, Lucerne, Lupins, Narbon Beans, Navybeans, Oats, Perennial Ryegrass, Persian Clover, Phalaris, Rapeseed, Rice, Safflower, Sorghum, Soybean, Subterranean Clover, Sunflower, Triticale, Vetch, Wheat, White Clover	Fumitory (white), Ball Mustard, Indian Hedge Mustard, Common Sowthistle, Turnip Weed, Wild Turnip, Wild Radish	ALL STATES	415mL-1.2L + Glyphosate 540g/L at recommended label rates	<b>RATE SELECTION:</b> Use the lower rate for seedling broadleaf weeds and increase to the higher rate for broadleaf weeds more than 10cm diameter/high. Always add the mixture product at recommended label rates.  At the time of application, all weeds must be actively growing and not under stress from low moisture, frost, cold, disease or water-logging. If grazing has occurred allow regrowth to 6-8cm before spraying and use higher rate. Always add either a non-ionic surfactant or an acidifying surfactant in accordance with label directions on the mixture product.  Use an acidifying surfactant with the mixture product if insecticides will be included in the tank mixture or if faster brownout of weeds is required.
	Seedlings of: Australian Bindweed, Bellvine, Caltrop, New Zealand Spinach, Raspweed	QLD, NSW, ACT only		
	Ageratum (Blue Top), Dock, Volunteer Lupins, Volunteer Peas, Volunteer Sunflowers, Charlock, Fumitory (Red), Medic, Paterson's Curse, Prickly Lettuce (Wild Lettuce), Saffron Thistle, Spear Thistle, Variegated Thistle	ALL STATES	570-760mL + Glyphosate 540g/L at recommended label rates	
	Bathurst Burr, Blackberry Nightshade, Californian Burr, Horehound Seedlings, Lincoln Weed Seedlings, Marshmallow Seedlings, Sorrel Seedlings, Thornapple, Volunteer Vetch, Volunteer Safflower, Common Ice-Plant, Storksbill/Erodium Seedlings, Ivyleaf Speedwell, Melilotus, Shepherd's Purse, Skeleton Weed (Suppression only), Ward's Weed, Wireweed Seedlings (Hogweed), White Clover, Sub-Clover		760mL-1.1L + Glyphosate 540g/L at recommended label rates	
Fallow, Stubble Spray prior to Direct Drilling or Sowing Winter Cereals	Refer weed table	QLD, NSW, ACT only	1.1-1.7L + Glyphosate 540g/L at recommended label rates	Observe plant back periods given in the table in this booklet. Can be mixed with chloresulfuron, paraquat or paraquat/diquat where grasses are present.  For Skeleton Weed, spraying should only be done 6-8 weeks before anticipated sowing date and subsequent cultivation limited to a minimum.
		QLD, NSW, ACT only	295mL-1.8L	
		NSW, ACT only	760mL-2.2L	
Fallow, Stubble Spray prior to Direct Drilling or Sowing Winter Cereals and Peanuts		QLD, NT only		

**Table 2. Field Crops**

CROP	TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS
Wheat, Barley, Triticale, Cereal Rye	Refer to weed table	QLD, NSW, ACT, VIC, TAS, SA only	425mL-1.8L	Apply after the first node can be felt at the base of a tiller and before swelling of the head can be felt in a tiller (NSW, ACT, SA only).  Apply from tillering to boot stage (VIC only).  Apply from mid-tillering to before boot stage (QLD only).  Apply at 5 leaf to fully tillered (TAS only).
Oats		QLD, NSW, ACT, VIC, SA only	DO NOT exceed the maximum rate given above.	
Cereals: Wheat, Oats, Barley	Cape Tulip	WA only	885mL-1.65L	Apply from the 5 leaf stage up to jointing stage (Zadoks 15-33).
	Dock, Saffron Thistle		1.45L	Apply after the 6 leaf stage (Z.16) for cranbrook, jacup, aroona and spear wheat and mortlock oats to avoid possible damage.
	Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Wild Radish		1L	DO NOT spray if Lucerne is present.
	Wild Turnip		885mL	<b>WEED STAGE:</b> 10-15cm. Docks should be sprayed before 5 leaf stage.
	Capeweed, Doublegee, Erodium, London Rocket, Lupin, Mustard, Rapistrum, Wild Radish, Wild Turnip		235mL/ha plus 500mL/ha Flowable Diuron	<b>Cape Tulip</b> – low rate for cormils only.  Apply when crop has 4-5 leaves and most weeds have germinated and are in 2-5 leaf stage. Crop and weeds should be dry at time of application. Some temporary yellowing of crop may occur after application.  DO NOT apply to undersown medics.  <b>TANK MIXTURES:</b> Read and follow all label directions including restraints, spray drift restraints, mandatory no-spray zones, critical comments, withholding periods, Regional use restrictions and safety directions for the tank mix products.

Table 2. Field Crops – continued

CROP	TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS
Wheat, Barley	Wild Radish	NSW, ACT, VIC, SA only	105mL/ha + 850g/ha 700g/kg methabenzthiazuron	Spray 2-6 weeks after sowing and not later. DO NOT use on crops undersown with Lucerne.
Sugarcane	Bindy Eye (Star Burr), Blue Top, Cobblers Pegs, Fleabanes, Jute, Leucas, Needle Burr, Spear Thistle, Water Primrose, Ipomea Vines, Convolvulus Vines	QLD only	2.3-4.6L	Add 60-120mL of a non-ionic surfactant (900g/L) to 100L of spray mixture. Agitate well. DO NOT use on Q63, Q67, Q80 or Q96 varieties.
	Chinese Mint, Blue Snakeweed		4.6L	
Millet	Refer weed table	NSW, ACT, VIC, SA only	760mL-1.45L	Spray when secondary roots have developed, when fully tillered and before heads start to form at the base of the tillers. DO NOT use on Panorama or Panicum.
		QLD only	760mL-1.1L	
Saccharine, Broom Millet, Millet	Cape Tulip, Dock, Saffron Thistle, Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Radish, Wild Turnip	WA only	1.45L	Spray when crop is 10-30cm high and secondary roots have developed and before tasselling. Apply as direct spray to weeds.
Peanuts	Broadleaf Weeds except Noogoora Burr, Grasses except Mossman Burr	QLD, NT only	2.3L or 4.75L	<b>LOWER RATE:</b> Apply as BAND SPRAY as soon as possible after planting in a 55cm band. <b>HIGHER RATE:</b> Apply as OVERALL SPRAY after planting and before crop emergence. Some crop damage may occur if heavy rain falls between application and crop emergence.
Harvest Aid or Salvage Spray – Winter Cereals	Dessicate Broadleaf Weeds	ALL STATES	1.6-2.15L	Apply after dough stage.

Table 3. Pastures and Non-agricultural use

CROP	TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS
Pastures & Non-agricultural Areas	Refer weed table	QLD, NSW, ACT, TAS, SA only	695mL-2.2L	Pasture legumes including Lucerne, Clovers and Medics may be damaged unless well protected by grasses. Spot spraying is preferred.
	Amsinckia, Docks, Bindweed, Caltrop, Flatweed, Spear Thistle, Capeweed, Doublegee, Saffron Thistle, Mustard, Wild Radish, Wild Turnip, Annual Thistles, Paterson's Curse	WA only	1.45L/ha	For pastures not containing legumes. Only seedling Docks, Spear Thistle and Saffron Thistle will be controlled.
	Afghan Melons		2.1L plus 1% crop oil	Spray when plants are actively growing preferably before flowering or vining.
	Paddy Melons		1.0-1.45L	
	Prickly Saltwort		2.1L	Spray when plants are small.
	Stinkwort		2.1-4.2L plus surfactant	Best results are obtained when plants are small. Use high rate on larger plants.
	Dove Weed		4.2L	Spray after good emergence of seedlings.
Pastures, Rights-of-way and Industrial	Groundsel	QLD, NSW, ACT, SA only	380mL/100L water	<b>HIGH VOLUME:</b> Thoroughly wet plants.
			315mL/15L water	<b>CUT STUMP:</b> Swab the cut stump within one hour of cutting. Apply by a pouring can or knapsack spray.
	Lantana		380mL/100L water	Use a very coarse spray with sufficient pressure to penetrate canopy and wet stems as well as foliage. Spray at the end of a wet summer (March to May). Defoliation should occur but respraying of new growth will be necessary in the following autumn. Broadcast grass seed and keep stock off following summer to allow the pasture to establish. Damage may result to pasture legumes.
	Mother of Millions	NSW, ACT only	520mL/100L water	<b>Handgun only:</b> A thorough coverage of leaves and plantlets is necessary. Use a 1000g/L non-ionic surfactant at the rate of 1mL of surfactant per 1L of mixture.
	Noogoora Burr, Weir Vine ( <i>Ipomoea</i> )	QLD only	210mL/100L of water	In all cases apply to young, actively growing weeds, ensuring thorough coverage. * Spray rosette stage. • Repeat spraying if necessary.



**Table 3. Pastures and Non-agricultural use – continued**

CROP	TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS
Pastures, Rights-of-way and Industrial – <i>continued</i>	Annual & Perennial Pigweed, Artichoke Thistle, Bathurst Burr, Billygoat Weed, Blue Snake Weed, Burr Medic, Clockweed*, Fleabanes, Galvanised Burr, Hemlock, Hoary Cress, •Kyalinga Weed (Whisker Grass), Knobweed, Milky Cotton Bushes, Parthenium Weed, Paterson's Curse, Saffron Thistle, Star Burr, Thornapple, Variegated Thistle*	QLD only	380mL/100L of water	In all cases apply to young, actively growing weeds, ensuring thorough coverage. * Spray rosette stage. • Repeat spraying if necessary.
	Rubber Vine		210mL/10L water	Apply to freshly cut stump.

**Table 4. Pastures – Spray/Graze Techniques**

<b>Precaution:</b> An increased quantity of poisonous plants may be eaten by stock using spray-graze eg. Caltrop, Capeweed, Paterson's Curse and Variegated Thistle and deaths could result from causes such as nitrate poisoning. With Paterson's Curse, preferably graze stock soon destined for slaughter and avoid extended period of grazing. Avoid grazing with young or breeding stock. DO NOT graze horses or pigs on Paterson's Curse.				
TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS	
Amsinckia, Thistles, Capeweed, Doublegee, Mustard, Paterson's Curse, Wild Turnip, Wild Radish, Docks, Geranium, Erodium	SA only	695mL	Apply from 6 weeks after opening rains in autumn until the end of August. Seven days after spraying, stock paddock at 4-5 times normal rate, preferably with sheep. Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing. Then return to normal stocking levels. Use high stocking rates in following spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control.	
Annual Thistles, Capeweed, Doublegee, Mustards, Paterson's Curse, Turnip, Saffron Thistle, Spear Thistle	VIC, TAS only			
Amsinckia, Docks (seedling only), Capeweed, Doublegee, Mustard, Wild Radish, Wild Turnip, Paterson's Curse, Annual Thistles	WA only	820mL		
Spear Thistle, Saffron Thistle		1.6L	Apply to Saffron Thistle at the end of September when plants are running up to flower. Sub-clovers may be damaged at this rate and use is not recommended for all Medic pastures.	
Melons		2.1L	Heavy stocking on young plants sprayed with 750mL/ha provides effective control.	
Docks	VIC only	1.45L	Apply in September only and follow other recommendations above.	
Caltrop, Capeweed, Charlock, Mustards, Paterson's Curse, Shepherd's Purse, Saffron, Slender, Spear or Variegated Thistle, Turnip Weed, Wild Radish, Wild Turnip	NSW, ACT only	380mL-1.45L	Spray actively growing 6-8 week old weeds. Introduce stock 7-10 days after spraying, preferably sheep (cattle are less effective). Stocking rate should be at least 5 times heavier than normal until weeds have been reduced, but before survival of desirable pasture species is threatened. Lucerne and Medics may be damaged and should be grazed short before spraying. Other legumes may be affected.	

**Table 5. Oil Tea Tree**

CROP	WEEDS	STATE	APPLICATION RATE	CRITICAL COMMENTS
Oil Tea Tree	Refer to weed table	ALL STATES	Apply a maximum of 1.26L/ha	Apply as a shielded spray. Avoid contact with foliage, green stems, exposed non-woody roots, desirable plants and trees as severe injury or destruction may result. Apply following harvest as a blanket spray only after: • All residual tea tree foliage has been removed by mechanical shaving, or by using a burner, • No swollen buds are present on stumps. NOTE that buds can burst 8 days after harvest in summer and • Surface of cut stumps are dry before spraying commences.
	Purple Top ( <i>Verbena bonariensis</i> )		Apply 1.5L/ha plus 720g ai glyphosate/ha in a tank mix	Apply as a shielded spray. Avoid contact with foliage, green stems, exposed non-woody roots, desirable plants and trees as severe injury or destruction may result.

Table 6. Other uses

METHOD	CROP	TARGET WEEDS	STATE	RATE (/ha)	CRITICAL COMMENTS
	Lawn	Refer weed table	QLD, WA only	2.1-4.3mL/L	Wet foliage thoroughly.
Spot spraying	High Volume Spraying	Refer weed table	ALL STATES	Add 1/10th of rate on weed table to 150 litres of water. Each 150 litres of mix will cover 1000m <sup>2</sup> (1/10th ha) eg. If rate in weed table is 1.5L use 150mL/150L water.	

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

**Other Limitations: IN TASMANIA, THIS PRODUCT MAY ONLY BE USED FROM 15 APRIL TO 15 SEPTEMBER UNLESS OTHERWISE PERMITTED BY THE REGISTRAR OF PESTICIDES.**

**WITHHOLDING PERIODS:**

**PASTURE, CEREAL CROPS: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.**

**CROP HARVEST: NOT REQUIRED WHEN USED AS DIRECTED.**

**Oil Tea Tree: N/A**

**WEED TABLE:** The rates listed in the Weed Table below are spot spraying rates for use in crop or pasture, or for use where weeds only are present and no crop or pasture is involved.

**Note:** Where weeds are to be sprayed in a CROP or PASTURE (other than spot spraying) use only the rates given for the particular crop or situation indicated under the Directions for Use.

WEEDS	APPLICATION RATE (per hectare)							CRITICAL COMMENTS
	Crop						Pasture	
	VIC	NSW	SA	QLD	TAS	WA	QLD, NSW, SA, TAS only	
<i>Amaranthus</i> spp.	-	695mL-1.45L	-	1.1L	-	-	-	Spray young plants.
Apple of Peru	-	695mL-1.45L	-	1.1L	-	-	-	Spray young plants. Susceptible when young.
Bathurst Burr	-	1-1.45L	-	1.1L	-	-	1-1.45L not SA	Spray seedlings only.
Blackberry Nightshade	-	695mL-1.45L	-	1.1L	-	-	-	-
Califomia Burr	-	1-1.45L	-	1.1L	-	-	1-1.45L not SA	Spray seedlings only.
Cape Tulip	-	-	-	-	-	885mL-1.65L	-	Low rate for cormils only*.
Capeweed	1.8L	-	2.2L	-	1.8L	-	2.15-3.7L	Spray seedlings to rosette stage.
Caltrop	-	1-2.2L	-	1.1L	-	-	-	Moderately susceptible.
Charlock	695mL-1L	695mL-1.45L	695mL	-	1.8L	-	1-1.45L	Spray at rosette stage.
Clover	-	1.6L	-	-	-	-	-	-
Common Ice Plant	-	-	1.45L	-	-	-	-	-
Docks	1.8L	-	1.8L	1.8L	1.8L	1.45L	4.2L SA only	Spray at multiple leaf stage – effective only on seedlings.
Fat Hen	-	760mL-2.2L	-	1.1L	1.8L	-	-	Spray pre-flowering.
Fumitory - red	-	-	2.2L	-	-	-	-	-
Fumitory - white	1L	-	695mL	-	-	-	-	Spray at multiple leaf stage.
Hexham Scent/ Melilotus	1.8L	-	1.45L	1.8L	-	-	1.45-2.15L	Spray at multiple leaf stage, before seeding.
Hoary Cress	1.1-1.8L	1.45-2.15L	1.8L	1.8L	-	-	1.9-2.15L	Spray rosettes and pre- flowering.
Hogweed/ Wireweed	1.8L	-	-	1.8L	-	-	-	Spray at multiple leaf stage (VIC). Spray at seedling and young plant stage (QLD).
Horehound	-	-	1.8L	-	-	-	2.9-4.2L SA only	Spray seedlings.
Khaki Weed	-	-	-	-	-	-	1.45-2.8L not SA	Spray seedlings only.
Lincoln Weed	-	-	2.15L	-	-	-	-	Spray early rosettes.
London Rocket	-	-	-	-	-	1L	-	-
Lupins	-	1-2.15L	-	-	-	-	-	-

WEEDS	APPLICATION RATE (per hectare)							CRITICAL COMMENTS
	Crop						Pasture	
	VIC	NSW	SA	QLD	TAS	WA	QLD, NSW, SA, TAS only	
Mexican Poppy	-	-	-	1.8L	-	-	-	Spray seedlings – plants become more resistant with age.
Mint Weed	-	1.45L	-	1.1L	-	-	-	Spray seedlings – resistant in later stages.
Mustards	295-695mL	695mL-1.45L	695mL-1.8L	1.1L	-	1L	695mL-1.45L	Spray at 2-4 leaf up to rosette stage.
New Zealand Spinach	-	1.45-2.15L	-	-	-	-	-	–
Noogoora Burr	-	1-1.45L	-	1.1L	-	-	1-1.45L not SA	Spray seedlings only.
Paterson's Curse	-	1.45-2.15L	-	1.8L	-	1.65L	2.15-2.9L	Spray rosettes or before plants have 10 leaves. Later stages harder to kill.
Potato Weed	-	695mL-1.45L	-	1.1L	-	-	-	–
Rough Poppy	-	1.45L	-	-	-	-	-	–
Safflower	-	695mL-2.8L	-	-	-	-	-	–
Shepherd's Purse	-	1.45-2.15L	-	-	1.8L	-	1-1.45L	Spray young rosettes.
Skeleton Weed	1.8L	1.45-2.15L	1.8L	-	-	-	1.9-2.9L	Spray rosettes before aerial growth commences.
Sorrel	1.8L	2.15L	1.8L	-	-	-	-	Only moderately susceptible.
Speedwell Ivy Leaf	-	-	1.45L	-	-	-	-	–
Spiny Emex	-	-	-	1.8L	-	-	-	Only young plants are susceptible.
Stinkwort	-	1-1.8L	-	-	-	-	-	–
Storkbill/ Erodium	-	-	-	-	1.8L	-	2.1-4.2L	Spray seedlings to young rosettes.
Sunflower (seedlings)	1.8L	695mL-1.8L	-	1.1L	-	-	-	–
Thistle - Californian	-	-	-	-	760mL	-	4.2-4.9L	Repeated applications may be necessary (NSW, ACT, TAS only).
Thistle - Saffron	1.45L	695mL-1.8L	1.8L	1.8L	1.3L	1.45L	1.45-2.15L	Low rate only sufficient to control weeds in crops at rosette stage when sprayed early.
Thistle - Slender/Shore	-	1-1.8L	-	-	1.8L	-	1.45L	Suppression only.
Thistle - Soldier	1.8L	-	-	-	-	-	1.45-2.1L Not NSW, ACT, TAS	Spray young rosettes.
Thistle - Spear	695mL	-	-	-	1.8L	-	1.45-2.15L	Spray young rosettes.
Thistle - Star	-	-	-	-	-	-	2.1-4.2L SA only	Use higher rate as flower stalk appears.
Thistle - Variegated	-	695mL-2.2L	-	1.1L	1.8L	-	1.45-2.15L	Spray at rosette stage.
Thornapple	-	1-1.45L	-	-	-	-	2.1-3.2L Not SA	Spray seedlings only.
Turnip Weed/ Rapistrum	-	695mL-1.45L	-	695mL	-	1L	695mL-1.45L	–
Wards Weed	-	-	1.45L	-	-	-	-	–
Wild Cabbage	1.8L	-	-	-	-	-	-	Spray multiple leaves.
Wild Poppy	695mL	-	-	-	-	-	1.45-2.15L	Spray rosettes.
Wild Radish	1.8L	2.2L	1.8L	1.1L	1.8L	1L	1-1.45L	Spray up to young rosette stage.
Wild Turnip	295-695mL	695mL-1.45L	415mL	-	1.8L	885mL	695mL-1.45L	Spray 2-4 leaf up to rosette stage.
Vetches/Tares	1.8L	-	1.45L	-	-	-	-	Spray at multiple leaf stage.



Plant Back Days			
Crop/Rates	Up to 740mL/ha	740mL-1.5L/ha	1.5-2.2 L/ha
Balansa Clover	7	7	10
Barley %	1	1	3
Chickpeas #	7	14	21
Cotton	10	14	21
Faba Beans	7	7	10
Field Peas	7	14	14
Lentils	7	7	10
Linseed	7	7	14
Lucerne	7	7	10
Lupins +	7	14	21
Medic	7	7	10
Narbon Beans	7	7	10
Navy Beans	10	10	14
Oats	3	3	7
Perennial Ryegrass	7	7	10
Persian Clover	7	7	10
Phalaris	7	7	10
Canola/Rapeseed #	14	21	28
Rice	7	7	14
Safflower #	7	14	21
Sorghum @	3	7	10
Soybean	14	14	21
Sub Clover	7	7	10
Sunflower @	7	10	14
Triticale %	1	3	7
Vetch	7	7	10
Wheat %	1	3	7
White Clover	7	7	10

#### IMPORTANT

**WHEN APPLIED TO DRY SOILS AT LEAST 15mm (1/2 inch) OF RAIN MUST FALL PRIOR TO THE COMMENCEMENT OF THE PLANT BACK PERIOD.**

#### Notes:

- % In Queensland, no rainfall is required to fall prior to commencement of Plant Back Period for Wheat, Barley and Triticale.
- # In Queensland, planting of Canola/Rapeseed, Chickpeas and Safflower must be delayed for at least 14 days following rainfall of at least 15mm.
- @ In central Queensland, when using 1.05L/ha or less of TITAN Amine 475 Herbicide the Plant Back Period for sorghum and sunflower is 1 day irrespective of rainfall.
- \* In WA the Plant Back Period for Lupins at all rates is 28 days.

#### GENERAL INSTRUCTIONS

TITAN Amine 475 Herbicide is a water soluble liquid product with non-selective herbicidal activity against broadleaf weeds. TITAN Amine 475 Herbicide will control emerged weeds only, and provides no residual control although certain Plant Back Periods should be observed. TITAN Amine 475 Herbicide is absorbed by plant foliage and accumulates to toxic levels in the regions of growth and reproduction, upsetting the ability of plants to balance the synthesis and use of nutrients. Visible effects are a gradual yellowing and wilting of the plants which advances to complete browning of above ground growth and deterioration of root systems. Effects may not be apparent for 7-10 days or even up to 21 days under cold or cloudy conditions.

DO NOT treat weeds under poor growing or dormant conditions such as occur in drought, water-logging, disease, insect damage, following frost, weeds heavily covered with dust or silt. Reduced results may also occur if weeds are under stress from previous herbicide application. Rainfall occurring up to 6 hours after application may reduce effectiveness.

DO NOT spray if strong winds prevail.

#### CROP ESTABLISHMENT

TITAN Amine 475 Herbicide is recommended as a herbicide additive to glyphosate for control of emerged weeds prior to crop establishment. When TITAN Amine 475 Herbicide is applied prior to crop establishment certain Plant

Back Periods should be observed to ensure that the herbicide has degraded sufficiently to allow safe sowing of the intended crop.

This process is largely influenced by moisture, temperature and certain soil characteristics and may be delayed particularly when conditions are cold and dry. Refer to the Plant Back Period table for specific information. In seasons of heavy weed growth, or where the following conditions apply, it may be necessary to further delay sowing until a suitable seedbed can be formed.

Conditions which can delay crop germination and seedling development include:

- Heavy green or decaying weed growth incorporated into the soil;
- Soil compaction or crusting;
- Cold and wet soils;
- Deep seeding;
- Prior use of residual or pre-emergent herbicides.

To minimise these effects it is suggested that:

- Weed bulk be reduced by grazing and cultivating to leave trash on the surface to dry out;
- A friable seedbed be produced by cultivation, where necessary;
- The use of pre-emergent herbicides to be avoided if they might contribute to reduce germination;
- A correct seeding depth be used. The preferred alternative is to spray early to control any weeds in their less advanced stages and ensure the seedbed is in a suitable condition for early sowing when soil temperatures are not excessively cold.

#### APPLICATION

**Boom Equipment:** Application of TITAN Amine 475 Herbicide/glyphosate mixtures in spray volumes of 25-100L/ha is recommended. When chlorsulfuron or metsulfuron-methyl herbicides are included in the mixture a minimum spray volume of 30L/ha is recommended.

When simazine is included in the mixture a minimum spray volume of 100L/ha is recommended. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

**Aerial Equipment:** Application of TITAN Amine 475 Herbicide/glyphosate mixtures using boom equipment should occur in a minimum spray volume of 15L/ha. Swath width should be 15-17 metres.

**Application under hot conditions:** High temperature and/or low relative humidity cause excessive evaporation of spray droplets which may reduce results. When temperatures reach 25°C increase water volume to 30L/ha. DO NOT apply by aircraft when temperature is above 35°C. DO NOT use in intensive horticultural cropping areas. Thoroughly wash aircraft, especially landing gear after each day of spraying to remove herbicide residues.

#### EQUIPMENT MAINTENANCE

Spray solutions of TITAN Amine 475 Herbicide and glyphosate should be mixed, stored and applied only in stainless steel, aluminium, brass, copper, fibreglass, plastic-lined containers.

DO NOT mix, store or apply spray solutions in galvanised steel or unlined steel (except stainless steel) containers or spray tanks. TITAN Amine 475 Herbicide/glyphosate spray solutions may react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture that can flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source. Thoroughly clean all equipment after use either by using hot soapy water or 1% solution of ammonia followed by several clean water rinses or use a proprietary cleaner such as Spraymate Tank & Equipment Cleaner. If using Sulfonylurea herbicides such as chlorsulfuron or metsulfuron-methyl follow decontamination procedures detailed on those product labels.

#### COMPATIBILITY

TITAN Amine 475 Herbicide is compatible in tank mixes with atrazine, chlorsulfuron, dicamba, dimethoate, glyphosate, Lorsban\* 500EC, metsulfuron-methyl/omethoate, paraquat/diquat (eg. Spray.Seed\*), phosmet and simazine.

#### Note:

1. As formulations of other manufacturers' products are beyond the control of TITAN AG all mixtures should be tested on a small scale before mixing in the spray tank.
2. **Tank mixing instructions:** Fill the spray tank 1/4 full of water and agitate. Add wettable powders and water dispersible granules first. Agitate until these are uniformly dispersed, meanwhile adding water until the tank is 90% full. Add suspension concentrates (flowables) then soluble concentrates. Emulsifiable concentrates go in last. Top off the tank with water and continue agitation until all the ingredients are properly mixed. Observe any mixing sequence instructions mentioned on the tank mix products.



## SURFACTANT ADDITION

DO NOT add surfactant except for Conservation Tillage where the product is to be tank mixed with a glyphosate product. In this situation always add either a non-ionic surfactant (900g/L) such as Spraymate\* Activator, or an acidifying surfactant such as Spraymate LI-700 in accordance with label directions on the glyphosate product. Use an acidifying surfactant such as Spraymate LI-700 with glyphosate if insecticides will be included in the tank mixture or if faster brownout of weeds is required.

DO NOT mix with spraying oils, or any other materials or agricultural chemicals except as directed on this label.

DO NOT use an acidifying surfactant such as Spraymate LI700 if sulfonyl-urea herbicides (chlorsulfuron or metsulfuron-methyl) are included in the spray mixture.

## TANK MIXTURES

The TITAN Amine 475 Herbicide Directions for Use on this label are designed to be used as a tank mixture with glyphosate herbicides. However as shown in the compatibility and surfactant addition sections of this label, it is possible to extend/improve weed control to include other foliage applied and/or residual herbicides and adjuvants.

A mixture of TITAN Amine 475 Herbicide and glyphosate may be tank mixed with the following herbicides, insecticides and adjuvants where recommended in the Directions for Use tables. Read and follow all label Directions, Restraints and Plant Back Periods, Withholding Periods and Safety Directions for the tank mix products.

**Dicamba:** For improved control of Sow Thistle. Observe any regional use restrictions.

**Chlorsulfuron:** Will provide control for a wide range of broadleaf weeds and grasses.

**Metsulfuron-methyl:** For improved knockdown control of Yellow Burrweed (Amsinckia), Volunteer Chickpeas, Chickweed, Common Sowthistle, Cut-leaf Mignonette, Deadnettle, Faba Beans, Mallee Catchfly, Soursob, Stagger Weed, Wild Garlic. Chlorsulfuron herbicides do not provide residual in-crop weed control.

## INSECTICIDES

Dimethoate, Lorsban 500EC, omethoate and phosmet can be introduced into the tank mix for specific control to prevent insect damage to emerging crops.

## MIXING INSTRUCTIONS

TITAN Amine 475 Herbicide mixes readily with water. Ensure the spray tank is free of any residue of previous spray materials.

1. Fill the spray tank with clean water to one half of the required amount and start agitation. DO NOT use mechanical agitators as these may cause excessive foaming when herbicides are added.
2. Where an acidifying surfactant such as Spraymate LI-700 is recommended at either 100mL or 300mL/100L, add to tank through top mesh screen.
3. Add recommended herbicide additive/insecticide to the spray tank and mix thoroughly.
4. Add TITAN Amine 475 Herbicide and mix thoroughly.
5. Top up tank to 95% of desired capacity then add the glyphosate product and the remaining water.
6. When a non-ionic surfactant is used, add near the end of the filling process to minimise foaming.
7. Always maintain adequate agitation during application and use the tank mix promptly.

## RESISTANT WEEDS WARNING

TITAN Amine 475 Herbicide is a member of the Phenoxys group of herbicides. TITAN Amine 475 Herbicide has the disruptors of plant cell growth mode of action. For weed resistance management of TITAN Amine 475 Herbicide is a Group 4 herbicide. Some naturally occurring weed biotypes resistant to TITAN Amine 475 Herbicide and other Group 4 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 TITAN Amine 475 Herbicide or other Group 4 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, TITAN AG Pty Ltd accepts no liability for any losses that may result from the failure of TITAN Amine 475 Herbicide to control resistant weeds.

## RE-ENTRY PERIOD

DO NOT hand harvest sugar cane for at least 1 day after application.

If re-entering treated areas before the spray has dried, workers should wear overalls, elbow-length gloves and water-resistant footwear. Clothing must be laundered after each day's use.

## PROTECTION OF CROPS, NATIVE AND NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures. Avoid spray drift and vapour movement onto susceptible crops such as Cotton, Tobacco, Tomatoes, Vines, Lupins, Fruit Trees and Ornamentals.

## PROTECTION OF LIVESTOCK

Low hazard to bees. May be applied at any time as recommended in the Directions for Use.

## PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers.

## STORAGE AND DISPOSAL

**20L:** Store in the closed original container in a cool, well-ventilated area. Avoid prolonged storage in direct sunlight. Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals onsite. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty containers in an approved waste management facility. If no approved waste management facility 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 in accordance with local, state or territory regulations. DO NOT burn empty containers or product.

**110L:** Store in the closed original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Storage must be secure so that contents cannot be tampered with. All locks and/or seals must be in order. If locks or seals are broken prior to initial use then the integrity of this product cannot be assured. If this occurs TITAN AG Pty Ltd should be notified immediately. This minibulk/bulk container is reusable and remains the property of TITAN AG Pty Ltd. DO NOT rinse empty container. Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage. No other liquid, solid or pesticide product should be put into it. When empty return to TITAN AG Pty Ltd for cleaning, relabelling and refilling.

**1000L:** Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

## SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Corrosive to the eyes. Will damage the skin. Will irritate the nose and throat. Avoid contact with the eyes and skin. DO NOT inhale vapour or spray mist. When opening the container and preparing spray or using undiluted concentrate, wear cotton overalls buttoned to the neck and wrist and a washable hat, PVC or rubber apron, elbow-length chemical resistant gloves and full facepiece respirator with organic vapour/gas cartridge or canister. If applying by boomspray equipment with enclosed operator's cab and air filtration or aerial spraying equipment, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. If applying by hand-held spraying equipment or boomspray equipment with open operator's cab wear chemical resistant clothing buttoned to the neck and wrist over a layer of normal clothing and a washable hat, elbow-length chemical resistant gloves and full facepiece respirator with organic vapour/gas cartridge or canister. If clothing becomes contaminated with product remove clothing immediately. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. 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, goggles, respirator (and if rubber wash with detergent and warm water) and contaminated clothing.

## FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766.

## SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for TITAN Amine 475 Herbicide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit [www.titanag.com.au](http://www.titanag.com.au)

GROUP **4** HERBICIDE

**CONDITIONS OF SALE:** TITAN AG Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on TITAN AG's skill or judgment in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of TITAN AG Pty Ltd has any authority to add to or alter these conditions.

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia: Harmful if swallowed. Causes serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Harmful to aquatic life with long lasting effects. Precautionary Statements: Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves / eye protection / face protection. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Specific treatment (see on this label). Rinse mouth. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/regional/national regulations.

\* Other trademarks

