

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 I 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 susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.

IMPORTANT: READ THOROUGHLY BEFORE OPENING OR USING THIS PRODUCT.

APVMA Approval No.: 64433/48335

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

Restrictions: DO NOT spray if rain seems likely within 6 hours or if strong winds prevail.
DO NOT apply if crop or weeds are stressed due to dry or excessively moist conditions.
DO NOT use when breeze is blowing towards nearby susceptible plants.

1. CONSERVATION TILLAGE: REFER TO SECTION "SPRAY APPLICATIONS AND DRIFT RISK ASSESSMENT" BEFORE APPLICATION

SITUATION AND CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Preparatory spray for Fallows and Seedbeds or prior to sowing the following Crops: - Balansa Clover, - Barley, - Chickpeas, - Cotton, - Faba Beans, - Field Peas, - Lentils, - Linseed, - Lucerne, - Lupins, - Narbon Beans, - Navy Beans, - 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/ha plus a glyphosate product at recommended label rates	RATE SELECTION: 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 (eg. Activator*) or an acidifying surfactant such as Spraymate* LI-700 in accordance with label directions on the mixture product. Use LI-700 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/ha plus a glyphosate product 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	ALL STATES	760mL-1.1L/ha plus a glyphosate product at recommended label rates	
	Amaranth, Apple of Peru, Mexican Poppy, Annual Ground Cherry, Bladder Ketmia, Fat Hen, Melons, Native Rosella, Noogoora Burr, Potato Weed, Cow Vine, Yellow Vine, Rapeseed	QLD, NSW, ACT only	1.1L-1.7L/ha plus a glyphosate product at recommended label rates	
PASTURES: Conservation Tillage - Direct Drilling, Surface Sowing or Fallow Maintenance	Charlock, Mustards, Shepherd's Purse, Saffron, Slender, Spear & Variegated Thistles, Turnip Weed, Wild Radish, Wild Turnip	ALL STATES	695mL-2.1L/ha	Apply to actively growing young weeds before sowing. Observe plant back periods given in the table on this leaflet.
	Clover Sorrel		1.45L/ha plus 280mL-400mL/ha dicamba (500g/L)	Apply to actively growing plants in Autumn. DO NOT sow pasture seed for at least 30 days after application.

2. FIELD CROPS: REFER TO SECTION "SPRAY APPLICATIONS AND DRIFT RISK ASSESSMENT" BEFORE APPLICATION

SITUATION AND CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Wheat	Refer to Weed Table	QLD, NSW, ACT, VIC, TAS, SA only	425mL-1.8L/ha	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, 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).
Barley			Refer to weed table for specific rates in each state	
Cereal Rye, Triticale				
Oats				
Cereals: Wheat, Oats, Barley	Cape Tulip	WA only	885mL-1.65L/ha	Apply from the 5 leaf stage up to jointing stage (Zadoks 15-33). Apply after the 6 leaf stage (Z.16) for Cranbrook, Jacup, Aroona and Spear wheat and Mortlock oats to avoid possible damage. DO NOT spray if Lucerne is present. Weed Stage: 10-15cm. Docks should be sprayed before 5 leaf stage. Cape Tulip – low rate for cormils only.
	Dock, Saffron Thistle		1.45L/ha	
	Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Wild Radish		1L/ha	
	Wild Turnip		885mL	
	Capeweed, Doublegee, Erodium, London Rocket, Lupin, Mustard, Rapistrum, Wild Radish, Wild Turnip		235mL plus 500mL/ha diuron (500g/L)	
Wheat, Barley	Wild Radish	NSW, ACT, VIC, SA only	165mL plus 850g/ha methabenz-thiazuron (700g/kg)	Spray 2-6 weeks after sowing and not later. DO NOT use on crops undersown with Lucerne.

2. FIELD CROPS – continued

SITUATION AND CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Fallow, Stubble Spray prior to Direct Drilling or Sowing a) Winter Cereals b) Winter Cereals and Peanuts	Refer to Weed table	VIC only	295mL-1.8L/ha	Observe plant back periods given in the table in this booklet. Can be mixed with chlorsulfuron, paraquat or paraquat/diquat (e.g. Spray.Seed*) 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.
		NSW, ACT only	760mL-2.2L/ha	
		QLD only		
Millet		NSW, ACT, VIC, SA only	760mL-1.45L/ha	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/ha	
Sacaline, Broom Millet, Millet	Cape Tulip, Dock, Saffron Thistle, Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Radish, Wild Turnip	WA only	1.45L/ha	Spray when crop is 10-30cm high and secondary roots have developed and before tasselling. Apply as direct spray to weeds.
Sugar Cane	Bindy Eye (Star Burr), Blue Top, Cobblers Pegs, Fleabanes, Jute, Leucas, Needle Burr, Spear Thistle, Water Primrose, Ipomea Vines, Convolvulus Vines Chinese Mint, Blue Snakeweed	QLD only	2.3-4.6L/ha	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.
			4.6L/ha	
Peanuts	Broadleaf Weeds except Noogoora Burr, Grasses except Mossman Burr	QLD only	2.3L/ha or 4.75L/ha	Lower Rate: Apply as BAND SPRAY as soon as possible after planting in a 55cm band. Higher Rate: 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	ALL STATES	1.6-2.15L/ha	Apply after dough stage.

3. PASTURES, NON AGRICULTURAL, RIGHTS OF WAY, INDUSTRIAL, LAWNS: REFER TO SECTION "SPRAY APPLICATIONS AND DRIFT RISK ASSESSMENT" BEFORE APPLICATION

SITUATION AND CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Pastures & non-agricultural	Refer to Weed Table	QLD, NSW, ACT, TAS, SA only	695mL-2.2L/ha	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 Thistles and Saffron Thistle will be controlled.
	Afghan Melons		2.1L/ha plus 1% crop oil	Spray when plants are actively growing preferably before flowering or vining.
	Paddy Melons		1-1.45L/ha	
	Prickly Saltwort (Roly Poly)		2.1L/ha	Spray when plants are small.
	Stinkwort		2.1L-4.2L/ha plus surfactant	Best results are obtained when plants are small. Use high rate on larger plants.
	Dove Weed		4.2L/ha	Spray after good emergence of seedlings.
Pastures, Rights of Way & Industrial	Boxthorn, Boneseed, Hawthorn	VIC, SA only	105mL/10L water	Spot spraying for Boneseed only, thoroughly wet plants or seedlings.
	Groundsel	QLD, NSW, ACT, SA only	1.3L/15L water	Misting: Lightly wet plants.
			380mL/100L water	High Volume: Thoroughly wet plants.
			315mL/15L water	Cut Stump: Swab the cut stump within one hour of cutting. Apply by a pouring can or knapsack spray.
			3.8-5.7L/ha	Aerial Application: Spray when Groundsel is actively growing.
	Lantana		380mL/100L water	Use a 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	Hand gun and Knapsack only: A thorough coverage of leaves and plantlets is necessary. Use Spraymate Chemwet 1000 at the rate of 1.0mL of surfactant per 1L of mixture.	
Noogoora Burr, Weir Vine (Ipomea)	QLD only	210mL/100L water	In all cases apply to young, actively growing weeds, ensuring thorough coverage.	

3. PASTURES, NON AGRICULTURAL, RIGHTS OF WAY, INDUSTRIAL, LAWNS – continued

SITUATION AND CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Pastures, Rights of Way & 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 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.
Pastures - Spray/Graze Techniques				Precaution: 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.
	Amsinckia, Thistles, Capeweed, Doublegee, Mustard, Paterson's Curse, Wild Turnip, Wild Radish, Docks, Geranium, Erodium	SA only	695mL/ha	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 Spear Thistle, Saffron Thistle	WA only	820mL/ha	
	Melons		2.5L/ha	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.
	Docks	VIC only	2.1L/ha	Heavy stocking on young plants sprayed with 750mL/ha provides effective control.
	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	1.45L/ha	Apply in September and follow other recommendations above.
Lawns	Refer to Weed Table	QLD, WA only	380mL- 1.45L/ha	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 or desirable pasture species is threatened. Lucerne and Medics may be damaged and should be grazed short before spraying. Other legumes may be affected.
			2.1mL-4.3mL/ 1L water	Wet foliage thoroughly.

4. SPOT SPRAYING: REFER TO SECTION "SPRAY APPLICATIONS AND DRIFT RISK ASSESSMENT" BEFORE APPLICATION

SITUATION AND CROP	WEEDS	STATE	CRITICAL COMMENTS
High volume spraying	Refer to Weed Table	ALL STATES	Add 1/10th of rate on weed table to 150L of water. Each 150L of mix will cover 1000m ² (1/10th ha) eg. if rate in weed table is 1.5L, use 150mL/150L water.
Knapsack Application			Add 1/100th of rate on weed table to 10L of water. Each 10L of mix will cover 100m ² (1/100th ha) eg. if rate in weed table is 1.5L, use 15mL/10L water.

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

WITHHOLDING PERIODS:
PASTURE, CEREAL CROPS:
CROP HARVEST:

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.
NOT REQUIRED WHEN USED AS DIRECTED.

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

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 tile 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	-	-	-	-
California 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	-	-	-	-	-	-
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 for TITAN AMINE 475 HERBICIDE

CROP	RATES		
	Up to 695mL/ha	695mL-1.45L/ha	1.45-2.15L/ha
Balansa Clover	7	7	10
Barley ¹	1	1	3
Chickpeas ²	7	14	21
Cotton	10	14	21
Canola/Rapeseed ²	14	21	28
Faba Beans	7	7	10
Field Peas	7	14	14
Lentils	7	7	10
Linseed	7	7	14
Lucerne	7	7	10
Lupins ⁴	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
Rice	7	7	14
Safflower ²	7	14	21
Sorghum ³	3	7	10
Soybean	14	14	21
Sub-Clover	7	7	10
Sunflower ³	7	10	14
Triticale ¹	1	3	7
Vetch	7	7	10
Wheat ¹	1	3	7
White Clover	7	7	10

IMPORTANT: WHEN APPLIED TO DRY SOILS AT LEAST 15mm 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 at least 15mm.
- In Central Queensland, when using 1.6L/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.

SPRAY APPLICATIONS AND DRIFT RISK ASSESSMENT

USE ONLY when wind speed is more than 3 kilometres per hour or less than 15 km/hr as measured at the application site.

USE ONLY coarse to very coarse spray quality according to the ASAE S572 definition for standard nozzles.

Checklist:

- Have you cleaned/decontaminated your boom sprayer?
- Have you contacted your neighbour prior to spraying?
- Is your sprayer set-up correctly for the particular application?
- Check
 - boom calibration - at nozzle
 - nozzle choice - low drift/what spray quality-coarse to very coarse droplet?
 - boom height
 - speed of intended application
- You must check, determine and record the weather conditions immediately prior to and immediately after the spray application is made
- Record
 - temperatures
 - relative humidity
 - Delta T
 - Wind speed (min 3 km/hr, max 15 km/hr)
 - is there a temperature inversion
- Night spraying – extra care is required to ensure that inversion conditions are not present. Use smoke generator to determine wind direction and presence of inversion conditions.

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. USE ONLY coarse to very coarse spray according to the ASAE S572 definition for standard nozzles. 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 either Micronair or boom equipment should occur in a minimum spray volume of 15L/ha. USE ONLY when wind speed is more than 3 kilometres per hour or less than 15km/h, as measured at the application site. USE ONLY coarse to very coarse spray according to the ASAE S572 definition for standard nozzles. 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 and increase droplet size to at least 300 micron diameter. 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 (e.g. 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 LI-700 if sulfonyleurea 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 **GROUP I HERBICIDE** Phenoxy 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 I herbicide. Some naturally occurring weed biotypes resistant to TITAN Amine 475 Herbicide and other Group I 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 I 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.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Drift Warning: DO NOT use unless wind speed is more than 3 kilometres per hour and less than 15 kilometres per hour as measured at the application site. DO NOT apply with smaller than coarse to very coarse spray droplets according to the ASAE S572 definition for standard nozzles.

Direct spray contact or even slight drift may cause severe injury or destruction of any susceptible crop or other desirable plants including trees and native vegetation.

DO NOT use when breeze is blowing towards nearby susceptible plants.

DO NOT apply under meteorological conditions or from spraying equipment that may cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures.

Equipment settings which produce fine droplets (150 microns or less), "still air" and hot dry days may all contribute to drift.

This is a phenoxy herbicide that can cause severe damage to susceptible crops such as cotton, tobacco, tomatoes, flowers, vegetables, vines, fruit trees, legume crops and pastures, oil seed crops or other susceptible crops and trees (eg Kurrajongs, Belahs, Eucalypts)

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

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

STORAGE AND DISPOSAL

20L: Store in the closed original container in a cool, well-ventilated area. Avoid prolonged storage in direct sunlight. Triple or preferably pressure 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 bury empty containers in a local authority landfill. If no land fill 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.

110L: 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.

1000L: 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.

SAFETY DIRECTIONS

Poisonous if swallowed. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray, wear PVC or rubber apron, elbow length PVC gloves and face shield. When using the prepared spray, wear face shield. If product on skin, immediately wash area with soap and 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, face shield and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for TITAN Amine 475 Herbicide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9986 2943 or visit www.titanag.com.au

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.

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