

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

TITAN

METSULFURON 600 WG HERBICIDE

ACTIVE CONSTITUENT: 600g/kg METSULFURON-METHYL

GROUP **2** HERBICIDE

For the control of certain broadleaf weeds in winter cereal crops and broadleaf weeds and brush species and herbaceous weeds in pastures, including native pastures, rights-of-way, commercial and industrial areas and desiccation of Chickpeas and Mung Beans as per directions for use table.

APVMA Approval No.: 61522/125768

Pack Size: 500g; 1kg; 5kg; 10kg



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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 (ALSO REFER CROP SAFETY SECTION BELOW):**

DO NOT store a suspension of TITAN Metsulfuron 600 WG Herbicide for more than 2 days otherwise significant breakdown will occur.

DO NOT store tank mixes of TITAN Metsulfuron 600 WG Herbicide.

SECTION A: WINTER CEREAL CROP SITUATION**DIRECTIONS FOR USE**

- (i) TITAN Metsulfuron 600 WG Herbicide only – Post crop and weed emergence by ground and aerial application.
- (ii) TITAN Metsulfuron 600 WG Herbicide Mixtures – Post crop and weed emergence by ground and aerial application.
- (iii) TITAN Metsulfuron 600 WG Herbicide plus TITAN Glyphosate products – Fallow/pre-plant knockdown weed control.

Restraints: DO NOT apply to paddocks where there is a high risk of weeds resistant to Group 2 Herbicides.

DO NOT apply to crops under stress.

DO NOT apply if rainfall is expected within 2 hours.

DO NOT use on furrow or flood irrigated crops.

DO NOT apply before the three leaf stage of the crop when used for post-emergent weed.

DO NOT use Group 2 Herbicide (ALS inhibitor) if it has been used during the current season.

CROPS	WEEDS CONTROLLED	STATES	RATE g/ha	CRITICAL COMMENTS
Wheat, Barley, Triticale and Cereal Rye	African Turnip Weed (<i>Sisymbrium thellungii</i>)	QLD only	5	Apply before the 6 leaf stage.
	Amsinckia/Yellow Burweed (<i>Amsinckia</i> spp.)	WA only	5 or 7	Use the higher rate for larger weeds or heavy weed pressure.
		NSW, VIC, TAS, SA only		
	Ball Mustard (<i>Neslia paniculata</i>)	SA only	5	
	Boggabri Weed/Dwarf Amaranth (<i>Amaranthus macrocarpus</i>)	QLD only	7	Apply at cotyledon to 10cm height or diameter.
	Colomba Daisy (<i>Pentzia suffruticosa</i>)	SA only	5	
	Cape Tulip (<i>Homeria</i> spp.)	WA only		
	Charlock (<i>Sinapsis arvensis</i>)	NSW, VIC, TAS, SA only		
	Chickpeas (Volunteer) (<i>Cicer arietinum</i>)	QLD, NSW, VIC, SA only		
	Chickweed (<i>Stellaria media</i>)	NSW, VIC, TAS, SA only		
	Chicory (<i>Cichorium intybus</i>)	QLD only		
	Clover (Subterranean) (<i>Trifolium subterraneum</i>)	ALL STATES		
	Common Sowthistle (<i>Sonchus oleraceus</i>)	QLD, NSW, VIC, TAS only		Apply up to the 4 leaf stage.
	Cutleaf Mignonette (<i>Reseda lutea</i>)	TAS, SA only	7	Spray actively growing large plants, up to the early flowering stage. Plants emerging after spraying may not be controlled.
	Deadnettle (<i>Lamium amplexicaule</i>)	ALL STATES	5	
	Denseflower Fumitory (<i>Fumaria densiflora</i>)	NSW, SA only		
	Dock (Broadleaf) (<i>Rumex obtusifolius</i>)	WA only	5 or 7	Use the higher rate under heavy weed pressure.
		QLD, NSW, VIC, TAS, SA only		
	Faba Beans (<i>Vicia faba</i>)	VIC, SA only	5	Apply after the 3 node stage.
	Field Peas (<i>Pisum sativum</i>)	VIC, TAS, SA, WA only		
		NSW only	7	
	Hare's Ear/Treacle Mustard (<i>Conringia orientalis</i>)	VIC only	5	Apply after 5 leaf stage.
	Hogweed/Wireweed (<i>Polygonum aviculare</i>)	WA only	5	Apply before the 4 leaf stage.
		NSW, VIC, TAS, SA only	5 or 7	Apply before the 4 leaf stage. Use the higher rate when weed populations are dense and majority of weeds are 4 leaf.
		QLD only	7	Apply when weeds are cotyledon – 3 leaf stage.
	Indian Hedge Mustard (<i>Sisymbrium orientale</i>)	ALL STATES	5	Heavy populations and/or those suffering cold or moisture stress may not be completely controlled – a tankmix with LVE MCPA is recommended.
	Lincoln Weed (<i>Diplotaxis tenuifolia</i>)	SA only	7	Apply to actively growing plants from late winter to spring. Plants emerging after spraying may not be controlled.
	Lupins (<i>Lupinus albus</i>)	NSW, VIC, SA, WA only	5	

CROPS	WEEDS CONTROLLED	STATES	RATE g/ha	CRITICAL COMMENTS
Wheat, Barley, Triticale and Cereal Rye – continued	Mallee Catchfly (<i>Silene apetala</i>)	SA only	5	
	Medic (<i>Medicago</i> spp.)	ALL STATES		
	New Zealand Spinach (<i>Tetragonia tetragonoides</i>)	QLD only	7	Apply before the 4 leaf stage.
	Parthenium Weed (<i>Parthenium hysterophorus</i>)		5 or 7	Apply the lower rate before the 4 leaf stage and the higher rate at 4 leaf to rosette stage.
	Paterson's Curse/Salvation Jane (<i>Echium plantagineum</i>)	TAS, WA only	5	
		NSW, SA only	5 or 7	Use higher rate under heavy weed pressure.
	Prickly Lettuce (<i>Lactuca serriola</i>)	QLD, SA, VIC, TAS only		Use the higher rate for larger weeds or heavy weed pressure.
		WA only	5	
	Red Pigweed (<i>Portulaca oleracea</i>)	QLD only		Apply before the 6 leaf stage.
			7	Apply rate when weed populations are dense and majority of weeds are 6 leaf stage.
	Rough Poppy (<i>Papaver hybridum</i>)	NSW, VIC, TAS, SA only	5	
	Saltbush (<i>Atriplex muelleri</i>)	QLD only	5 or 7	Use the low rate up to the 4 leaf stage and the higher rate at the 4-6 leaf stage.
	Shepherd's Purse (<i>Capsella bursa-pastoris</i>)	NSW, VIC, TAS, SA only	5	
	Skeleton Weed (Suppression only) (<i>Chondrilla juncea</i>)	NSW, VIC, SA only	7	
		WA only	5	
	Slender Celery (<i>Apium leptophyllum</i>)	QLD only		
	Smallflower Fumitory (<i>Fumaria parviflora</i>)	SA only		
	Sorrel (<i>Rumex acetosella</i>)	NSW, VIC, TAS, SA, WA only		Some regeneration from underground rootstocks and new germinations may occur late in the season.
	Soursob (<i>Oxalis pes-caprae</i>)	NSW, VIC, TAS, SA, WA only		Apply after majority of Soursobs have emerged and are actively growing.
	Spiny Emex/Doublegee/Three-cornered Jack(s) (<i>Emex australis</i>)	WA only		Use higher rate under heavy weed pressure.
		QLD, NSW, VIC, TAS, SA only	5 or 7	
	Stagger Weed (<i>Stachys arvensis</i>)	ALL STATES	5	
	Storksbill/Wild Geranium (<i>Erodium</i> spp.)	VIC, TAS, SA, WA only		
	Turnip Weed (<i>Rapistrum rugosum</i>)	ALL STATES		
	Volunteer Sunflower (<i>Helianthus annuus</i>)	QLD only	5 or 7	Apply at the low rate at cotyledon to 4 leaf stage and the higher rate at the 4-8 leaf stage.
		NSW only	7	Apply at cotyledon to 8 leaf stage.
	Wild/Crow Garlic (<i>Allium vineale</i>)	VIC, TAS only	7	Apply at the 1-2 leaf stage.
	Wild Turnip (<i>Brassica tournefortii</i>)	ALL STATES	5	

TITAN METSULFURON 600 WG HERBICIDE MIXTURES

For the control of weeds other than those previously listed, the following mixtures with their appropriate timings are recommended. For mixing instructions refer to "Spray Preparation" section.

CROPS	WEEDS CONTROLLED	STATES	RATE/ha	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, Barley, Triticale and Cereal Rye	Capeweed (<i>Arctotheca calendula</i>), Wild Radish (<i>Raphanus raphanistrum</i>)	NSW, VIC only	5g + 500mL Diuron (500g/L) + 500mL MCPA Amine (500g/L)	3 to 5 leaf (Zadoks 13-15) NSW only 5 leaf (Zadoks 15) VIC only	DO NOT apply to Kamilaroi, Shortim or Olympic Wheat. Apply when weeds are 2-5 leaf.
		SA only	5g + 500mL Diuron (500g/L) + 350mL MCPA Amine (500g/L)	3 to 5 leaf (Zadoks 13-15)	
		WA only	5g + 350mL Diuron (500g/L) + 400mL MCPA Amine (500g/L)	3 to 4 leaf (Zadoks 13-14)	Apply when weeds are 2-5 leaf.
Wheat, Barley	Capeweed (<i>Arctotheca calendula</i>)		5g + 550mL Terbutryn + 600mL MCPA Amine (500g/L)	3 leaf to early tillering (Zadoks 13-21)	Apply when weeds are 2-6 leaf.
		SA only	5g + 550mL Terbutryn		
		NSW only	5g + 850mL Terbutryn		
		NSW, VIC, SA, WA only	5g + 1L Agtryne	3 to 5 leaf stage (Zadoks 13-15)	Spray actively growing weeds at the 2-6 leaf stage.

CROPS	WEEDS CONTROLLED	STATES	RATE/ha	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, Barley, Cereal Rye and Triticale	Capeweed (<i>Arctotheca calendula</i>)	WA only	5g + 750mL TITAN Bromoxynil MA Selective Herbicide	3 leaf to full tillering (WA only)	Apply when weeds are up to 6 leaf stage.
		QLD, NSW, VIC, TAS, SA only	5g + 1.4L TITAN Bromoxynil MA Selective Herbicide	5 leaf to full tillering (QLD, NSW, VIC, TAS only)	
		WA only		3 leaf to full tillering (WA only)	Apply when weeds are up to 6-8 leaf stage.
		QLD, NSW, VIC, TAS, SA only	5g + 2.1L TITAN Bromoxynil MA Selective Herbicide	5 leaf to full tillering (QLD, NSW, VIC, TAS only)	
	Wild Radish (<i>Raphanus raphanistrum</i>)	QLD only	5g + 700mL to 1L MCPA Amine (500g/L)	Early tillering to before boot (Zadoks 21-39)	Apply the lower rate to seedling weeds (3-6 leaf) and the higher rate on well developed weeds up to rosette.
		NSW only	5g + 700mL to 1L MCPA Amine (500g/L)	Apply 700mL rate after crop has reached 5 leaf stage. Use higher rates after the first node can be felt at the base of the tiller and before swelling of the head can be felt in the tiller	
		SA only	5g + 1.4L MCPA Amine (500g/L)	Early tillering to before boot (Zadoks 21-39)	Apply when weeds are seedling to rosette.
		WA only	5g + 1.2L MCPA Amine (500g/L)	5 leaf to tillering (Zadoks 15-30)	
Wheat, Barley			5g + 250mL TITAN Diflufenican and MCPA Selective Herbicide	Wheat: 3 leaf to late tillering (Zadoks 13-30) Barley: 5 leaf to late tillering (Zadoks 15-30)	Apply up to the 4 leaf stage and not more than 10cm in diameter.
Wheat, Barley, Cereal Rye and Triticale	Wild Radish (<i>Raphanus raphanistrum</i>)	NSW, VIC, TAS, SA, WA only	5g + 1.1 to 1.6L TITAN MCPA 500 LVE Selective Herbicide	5 leaf to commencement of flag leaf (Zadoks 15-37)	Apply up to 2-3 leaf stage only.
	Saffron Thistle (<i>Carthamus lanatus</i>)	NSW, VIC, TAS, SA, WA only	5g + 1.1 to 1.6L TITAN MCPA 500 LVE Selective Herbicide	5 leaf through to commencement of flag leaf (Zadoks 15-37)	Spray young rosettes before leaves become spiny.
			5g + 300mL TITAN Clopyralid 300 Herbicide	4 to 5 leaf stage (Zadoks 14-15)	Spray when weeds are young and actively growing. DO NOT apply TITAN Clopyralid 300 Herbicide to a cereal crop if field peas are to be sown the following season unless the cereal stubble is burnt.
Wheat, Barley, Cereal Rye and Triticale	Variegated Thistle (<i>Silybum marianum</i>)	TAS only*	5g + 1.5L 2,4-D Amine (500g/L)	5 leaf to early tillering (Zadoks 15-21)	Apply to weeds at seedling to rosette stage.
NSW only		5g + 700mL to 1.7L 2,4-D Amine (500g/L)	Apply after the first node can be felt at the base of the tiller and before swelling of the head can be felt in the tiller	Apply to weeds at seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.	
QLD only		5g + 1.1L 2,4-D Amine (500g/L)	Mid tillering to before boot (Zadoks 23-29)	Apply to weeds in the seedling to rosette stage.	
NSW, VIC, TAS, SA, WA only		5g + 840mL to 1.1L TITAN MCPA 500 LVE Selective Herbicide	Apply from 5 leaf through to commencement of flag leaf (Zadoks 15-37)	Spray at pre-cabbage stage.	

CROPS	WEEDS CONTROLLED	STATES	RATE/ha	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat	Slender Thistle (<i>Carduus tenuiflorus</i> , <i>Carduus pycnocephalus</i>)	NSW, VIC, TAS, SA, WA only	5g + 2.1L TITAN MCPA 500 LVE Selective Herbicide	Apply from 5 leaf through to commencement of flag leaf (Zadoks 15-37)	Moderately susceptible. Spray young rosettes.
Wheat, Barley, Cereal Rye and Triticale		NSW only	5g + 1L to 1.7L 2,4-D Amine (500g/L)	Apply after the first node can be felt at the base of the tiller and before swelling of the head can be felt in the tiller	Apply to weeds at seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.
		TAS only*	5g + 1.7L 2,4-D Amine (500g/L)	5 leaf to early tillering (Zadoks 15-21)	Apply to weeds at seedling to young rosette stage.
Wheat, Barley and Triticale	Climbing Buckwheat/Black Bindweed (<i>Fallopia convolvulus</i>)	QLD, NSW only	5 or 7g + 1L TITAN Picloram + MCPA 242 Herbicide	Apply from early tillering (when the main shoot has 4 to 5 leaves plus 2 or more new tillers have formed) to start of jointing (first node)	For best control apply at early tillering as this weed becomes increasingly difficult to control as it becomes larger.

* In Tasmania, 2,4-D can only be applied from 15 April to 15 September to minimise damage to grape vines through spray or vapour drift.

TITAN METSULFURON 600 WG HERBICIDE & TITAN GLYPHOSATE 450 HERBICIDE (GLYPHOSATE) FALLOW/PRE-PLANT KNOCKDOWN WEED CONTROL					
CROPS	WEEDS CONTROLLED	STATES	RATE/ha	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat	Refer to Post Crop and Weed Emergence section of this label (Table 1) and the TITAN Glyphosate 450 Herbicide Directions for Use	ALL STATES except WA	TITAN Metsulfuron 600 WG Herbicide 5 or 7g + TITAN Glyphosate 450 Herbicide at label rates	Refer to Post Crop and Weed Emergence section of this label (Table 1), and the TITAN Glyphosate 450 Herbicide Directions for Use	DO NOT apply less than 10 days prior to sowing as crop injury may occur, particularly under dry, cold conditions. Apply when weeds are actively growing. Refer to General Instructions and Critical Comments of the respective labels. Use the appropriate rate of each product for the target weed spectrum.
		WA only	TITAN Metsulfuron 600 WG Herbicide 5g + TITAN Glyphosate 450 Herbicide at label rates		
Barley, Cereal Rye or Triticale		ALL STATES except WA	TITAN Metsulfuron 600 WG Herbicide 5 or 7g + TITAN Glyphosate 450 Herbicide at label rates		
		WA only	TITAN Metsulfuron 600 WG Herbicide 5g + TITAN Glyphosate 450 Herbicide at label rates		DO NOT apply less than 6 weeks prior to sowing as crop injury may occur, particularly under dry, cold conditions. Apply when weeds are actively growing. Refer to General Instructions and Critical Comments of the respective labels. Use the appropriate rate of each product for the target weed spectrum.

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

CHICKPEA AND MUNGBEAN DESICCATION			
CROP	PURPOSE	APPLICATION RATE	CRITICAL COMMENTS
Chickpeas and Mung Beans Pre-harvest application as a crop desiccant and knockdown weed control	Field crop desiccation. Refer to post-crop and weed emergence section of this label and the glyphosate product directions for use.	5g/ha plus glyphosate at label rates	Apply when Chickpeas are physiologically mature and less than 15% of green pods are present. Apply when Mung Bean crop is mature and when pods are brown/black. Use the higher rate of glyphosate when crops or weeds are dense and when faster desiccation is required. Speed of desiccation is dependent on crop stage, growing conditions and weather conditions during and after application. This use should be part of an integrated weed management strategy that incorporates herbicides with different modes of action and alternative cultural weed practices.
Mung Beans	Field crop desiccation	5g/ha plus glyphosate at label rates	Apply when Mung Bean crop is mature and when pods are brown/black. Use the higher rate of glyphosate when crops or weeds are dense and when faster desiccation is required. Speed of desiccation is dependent on crop stage, growing conditions and weather conditions during and after application. This use should be part of an integrated weed management strategy that incorporates herbicides with different modes of action and alternative cultural weed practices.

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SECTION B: ESTABLISHED PASTURES OR PASTURE RENOVATION				
Restraints: DO NOT treat newly sown pastures as severe damage may occur. DO NOT use on pasture seed crops. DO NOT apply to weeds that are under stress or not actively growing. DO NOT apply if rainfall is expected within 2 hours. DO NOT store tank mixtures of TITAN Metsulfuron 600 WG Herbicide. DO NOT store a suspension of TITAN Metsulfuron 600 WG Herbicide for more than 2 days otherwise significant breakdown will occur.				
CROPS	WEEDS CONTROLLED	STATES	RATE g/ha	CRITICAL COMMENTS
Note: Always add a non-ionic surfactant (1000gac/L) eg. Wetspray 1000 at 200mL/100L water (0.2% volume/volume)				
ESTABLISHED PASTURES Tolerant Grass Species Perennial Phalaris and Perennial Cocksfoot (Stands greater than one year old) or PASTURE RENOVATION Use in rundown pastures to reduce weed burden before sowing with a pasture in the following year	Cape Tulip: Both one and two leaf (<i>Homeria</i> spp.)	NSW, VIC, TAS, SA, WA only	5	Apply at bulb exhaustion usually during July/early August. More than one year of application may be required to obtain control.
	Annual Clover (<i>Trifolium</i> spp.)	QLD, NSW, TAS, VIC, SA, WA only	5 - seedlings 10 - established	Apply before flowering. Best results when applied in spring prior to bolting.
	Dock (<i>Rumex</i> spp.)	WA only	5 or 10	Best results when applied in spring prior to bolting.
	Doublegee/Spiny Emex/Three-cornered Jack(s) (<i>Emex australis</i>)	NSW, VIC, TAS, SA only		Apply up to the 6 leaf stage. Use the higher rate on dense populations.
	Erodium/Storksbill/Wild Geranium (<i>Erodium</i> spp.)			Use the higher rate on dense populations. Spray before flowering.
	Annual Medics (<i>Medicago</i> spp.)	NSW, VIC, TAS, SA, WA only	5	For the best results apply before flowering.
	Onion Grass/Guildford Grass (<i>Romulea rosea</i>)		15	Apply at bulb exhaustion usually late June/July before the onset of browning off caused by the <i>Helminthosporium</i> fungus. When mixing with glyphosate use 10g/ha.
	Paterson's Curse/Salvation Jane (<i>Echium plantagineum</i>)	QLD, NSW, VIC, TAS, SA, WA only	10 or 15	Apply lower rate to small plants. Apply higher rate before bolting/flowering.
	Ragwort (<i>Senecio jacobaea</i>)	NSW, VIC, TAS, SA only	15	Apply to actively growing plants at the rosette to cabbage stage.
	Sorrel (<i>Rumex acetosella</i>) Soursob (<i>Oxalis pes-caprae</i>)	NSW, VIC, TAS, SA, WA only	5 - seedlings 10 - established 5 or 10	Best results when applied in spring prior to seed heads appearing. Use the higher rate on dense stands. Spray before flowering for best results.
	Wild Garlic (<i>Allium vineale</i>)		15	Apply at bulb exhaustion usually July to early August. More than one year of application may be required to obtain control.

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SECTION C: BRUSH CONTROL IN PASTURES, RIGHTS-OF-WAY, COMMERCIAL AND INDUSTRIAL AREAS

Restrictions: DO NOT store a suspension of TITAN Metsulfuron 600 WG Herbicide for more than 2 days otherwise significant breakdown may occur.
DO NOT store tank mixes of TITAN Metsulfuron 600 WG Herbicide when mixed with other materials.
DO NOT spray if rainfall is expected within 4 hours.

SITUATION	WEEDS CONTROLLED	STATE	RATE			CRITICAL COMMENTS
			Boom g/ha	Handgun g/100L	Gas Gun g/L	
Pastures*, Rights- of-way, Commercial and Industrial Areas	Alligator Weed (<i>Alternanthera philoxeroides</i>)	QLD, NSW, WA only	80	10		Apply in terrestrial situations only. Follow-up applications over at least two seasons are essential for complete control.
	Apple Box (<i>Angophora floribunda</i>), Messmate Stringybark (<i>E. obliqua</i>), Peppermint Gum (<i>E. radiata</i>), Red Gum (<i>E. blakelyi</i>), Yellow Box (<i>E. melliodora</i>)	QLD, NSW, SA, WA only		10 + Spraymate Freeway (200mL/100L)	1 + Spraymate Freeway (10mL/5L)	Apply to plants up to 4m high. Avoid spraying when plants are stressed. Ensure thorough foliage cover. Results cannot be guaranteed where suckers originate from large lignotubers.
	Australian Blackthorn (<i>Bursaria spinosa</i>)	QLD, NSW, VIC, TAS, WA only		10		Apply when bushes are actively growing. Avoid spraying when bushes are stressed. Handgun: Spray to thoroughly wet all foliage, but not to cause run-off.
	Bathurst Burr (<i>Xanthium spinosum</i>)	NSW, WA only		5 or 7.5		Apply to actively growing plants up to early flowering. Use the higher rate when plants are beyond early flowering. Plants under moisture stress will not be controlled.
	Bellyache Bush (<i>Jatropha gossypifolia</i>)	QLD, WA only		10 + Spraymate Freeway (200mL/100L)		
	Blackberry (<i>Rubus</i> spp.)	ALL STATES		10	1 + Spraymate Freeway (10mL/5L)	Apply when bushes are actively growing: TAS only: Apply after petal fall. VIC only: Apply between December and April. Spray to thoroughly wet all foliage and canes. Ensure peripheral runners are sprayed.
	Bitou Bush/Boneseed (<i>Chrysanthemoides monilifera</i>)	QLD, NSW, VIC, SA, WA only		10	1 + Spraymate Freeway (10mL/5L)	Spray to thoroughly wet all foliage. Minimise contact with desirable species.
	Bridal Creeper (<i>Myrsiphyllum asparagoides</i>)	SA, WA only		5		Apply during mid-June to late August. Follow-up applications over at least 2 seasons will be required for complete control. Water volumes of 500-800L/ha are recommended to minimize the risk of damage to native vegetation.
	Common Bracken (<i>Pteridium esculentum</i>)	ALL STATES	60	10		Spray after full frond expansion. Spray to thoroughly wet all foliage, but not to cause run-off. For boom application – adjust boom height to ensure complete spray overlap. Avoid spraying when plants are stressed or in conditions of prolonged dry weather when soils are dry.
	Crofton Weed (<i>Eupatorium adenophorum</i>)	QLD, NSW, WA only		15		Spray to thoroughly wet foliage but not to cause run-off. Extra care should be taken to get good spray coverage when spraying bushes situated in thickets. Apply to actively growing weeds up to early flowering. Best results are obtained on younger plants. If regrowth occurs, repeat in the subsequent growth period.
	Darling Pea (<i>Swainsona</i> spp.)	NSW, WA only	10			Apply during spring.
	Fennel (<i>Foeniculum vulgare</i>)	NSW only		10		Apply to actively growing plants.
	Golden Dodder (<i>Cuscuta australis</i>)	QLD, NSW, VIC, SA, WA only		1		Apply to actively growing plants. Apply as a spot spray to point of run-off. Ensure correct coverage of infested area. Apply pre-flowering.
	Gorse (<i>Ulex europaeus</i>)	NSW, VIC, TAS, SA, WA only		10 + Spraymate Freeway (200mL/100L)		Apply to bushes up to 2m tall. Ensure thorough spray penetration and coverage of the whole plant.
	Great Mullein (<i>Verbascum thapsus</i>)	NSW, WA only	20 + Spraymate Freeway (200mL/100L)			Regrowth may occur if growing conditions are not good. Apply during spring at times of good soil moisture to rosettes before stem elongation.

SITUATION	WEEDS CONTROLLED	STATE	RATE			CRITICAL COMMENTS
			Boom g/ha	Handgun g/100L	Gas Gun g/L	
Pastures*, Rights- of-way, Commercial and Industrial Areas – <i>continued</i>	Harrisia Cactus (<i>Eriocereus</i> spp.)	QLD, WA only		20		Spray and thoroughly wet using water volumes of 1,000-1,500L/ha. A follow-up treatment may be necessary.
	Hawthorn (<i>Crataegus laevigata</i>)	NSW, VIC, TAS, WA only		10		Apply when bushes are actively growing. Avoid spraying when bushes are stressed. Spray to thoroughly wet all foliage but not to cause run-off.
	Inkweed (<i>Phytolacca octandra</i>)	QLD, NSW, WA only		5		Spray to thoroughly wet all foliage but not to cause run-off.
	Japanese Sunflower (<i>Tithonia diversifolia</i>)	NSW, WA only		10		Apply to bushes up to 2.5m high when actively growing.
	Kangaroo Thorn (<i>Acacia paradoxa</i>)					
	Lantana (<i>Lantana camara</i>)	QLD, NSW, WA only		10	2 + Spraymate Freeway (10mL/5L)	Apply to bushes up to 2m tall. Spray to thoroughly wet all foliage and stems. Spray should penetrate throughout the bush. Should regrowth occur, re-treatment will be necessary.
	Mistflower (<i>Eupatorium riparium</i>)	QLD, NSW, WA only		5		Spray to thoroughly wet all foliage but not to cause run-off. Apply to actively growing weeds up to early flowering.
	Noogoora Burr (<i>Xanthium pungens</i>)	NSW, WA only		7.5		Apply to actively growing plants. Plants under moisture stress will not be controlled.
	Parthenium (<i>Parthenium hysterophorus</i>)	QLD, NSW, WA only	7	5		Handgun: Spray to thoroughly wet all foliage but not to cause run-off. Boom (Pastures only): Apply up to rosette stage. Spray to thoroughly wet all foliage. Adjust boom height to ensure complete overlap.
	Paterson's Curse/Salvation Jane (<i>Echium plantagineum</i>)	ALL STATES	15	5		Boomspray: Spray to thoroughly wet all foliage. Adjust boom height to ensure correct spray overlap. Handgun: Spray to thoroughly wet all foliage but not to cause run-off. WA only: Spray plants at early flowering stage (August-September).
	Privet (<i>Ligustrum</i> spp.)	QLD, NSW, WA only		10	1 + Spraymate Freeway (10mL/5L)	Apply to bushes up to 3m high. Complete foliar spray coverage is essential for control: partial spray coverage will result in recovery. DO NOT spray when bushes are stressed.
	Ragwort (<i>Senecio jacobaea</i>)	NSW, VIC, TAS, WA only	15	5		Apply to actively growing plants at rosette to cabbage stage.
	Rubber Vine (<i>Cryptostegia grandiflora</i>)	QLD, WA only		15		Apply to bushes up to 3m tall. Apply from October through April when bushes are actively growing. Ensure thorough spray coverage of all foliage and leaders. Incomplete coverage will result in regrowth.
	Smartweed (<i>Polygonium</i> spp.)	QLD, NSW, WA only	10	10		Apply to actively growing plants.
	Sweet Briar (<i>Rosa rubiginosa</i>)	NSW, TAS, VIC, SA, WA only		10	1 + Spraymate Freeway (10mL/5L)	Apply when bushes are actively growing. Avoid spraying when bushes are stressed, when leaf fall has commenced or after the end of February. Handgun: Spray to thoroughly wet all foliage, but not to cause run-off. VIC only – Gas Gun: Apply to bushes less than 2m high as application to bushes in excess of 2m may produce variable results. Apply with shots of 25mL of dilute product.
	Tree of Heaven (<i>Ailanthus altissima</i>)	NSW, WA only			As above	
	Wait-a-While (<i>Caesalpinia decapetala</i>)	QLD, WA only		10		
	Wild Turnip (<i>Brassica tournefortii</i>)	NSW, WA only		5		Apply to actively growing plants.

SITUATION	WEEDS CONTROLLED	STATE	RATE			CRITICAL COMMENTS
			Boom g/ha	Handgun g/100L	Gas Gun g/L	
Native Pastures*, Rights-of-way, Commercial and Industrial Areas, Agricultural Non-crop Areas	Toxic Pimelea species (Desert riceflowers, Flaxweed)	ALL STATES	10g/ha plus addition of a suitable nonionic surfactant as per label rate	10g/100L plus addition of a suitable non-ionic surfactant as per label rate	–	<p>To be applied when plant is green.</p> <p>Apply by boomspray in a volume of 1000L/ha.</p> <p>For spot spray thoroughly wet all foliage to the point of run-off (approx. 1000L/ha spray volume).</p> <p>DO NOT apply more than 2 applications per year with a minimum re-treatment interval of 21 days between consecutive applications.</p> <p>The applications could be used in creating and maintaining hospital areas for livestock suffering from Pimelea poisoning.</p> <p>Warning: Pimelea may become more attractive to stock after treatment. Stock should be excluded from treated areas until sprayed Pimelea plants are leafless, seedless and obviously dead.</p>
* WILL DAMAGE LEGUMES IN PASTURES.						

AERIAL APPLICATION BY HELICOPTER				
SITUATION	WEEDS CONTROLLED	STATE	RATE g/ha	CRITICAL COMMENTS
Pastures*, Rights-of-way, Commercial and Industrial Areas	Blackberry (<i>Rubus</i> spp.)	NSW, VIC, TAS, WA only	160	Apply when bushes are actively growing. TAS only: Apply after petal fall. VIC only: Apply between December and April. Use not less than 100L prepared spray/ha.
Flood Plains	<i>Mimosa pigra</i>	WA, NT only	50 or 60	Use the higher rate when air temperature exceeds 35°C. Apply in at least 60L/ha of clean water. Use D6 or D8 nozzles with 45 swirl plates pressurised to 210kPa to give a large droplet size. Add a non-ionic surfactant. Apply when plant is actively growing. Avoid spraying when plants are stressed.
* WILL DAMAGE LEGUMES IN PASTURES.				

TITAN METSULFURON 600 WG HERBICIDE & TITAN GLYPHOSATE 360 HERBICIDE				
SITUATION	WEEDS CONTROLLED	RATE – AERIAL OR BOOM	RATE – HANDGUN OR KNAPSACK	CRITICAL COMMENTS
Pastures*, Forests, Commercial and Industrial Areas, Rights-of-way, Domestic and Public Service Areas	Blackberry (<i>Rubus</i> spp.)	8.0L TITAN Glyphosate 360 Herbicide plus 60g TITAN Metsulfuron 600 WG Herbicide per ha	400mL TITAN Glyphosate 360 Herbicide plus 3g TITAN Metsulfuron 600 WG Herbicide per 100L water	For Blackberries: Apply from flowering until prior to leaf yellowing. Due to widespread picking of Blackberries by the public, it is not recommended that the product be applied to bushes bearing mature fruit. Use Pulse Penetrant at the rate of 100mL per 100L water.
	Bracken (<i>Pteridium esculentum</i>)	4.0L TITAN Glyphosate 360 Herbicide plus 30g TITAN Metsulfuron 600 WG Herbicide per ha	400mL TITAN Glyphosate 360 Herbicide plus 3g TITAN Metsulfuron 600 WG Herbicide per 100L water	For Bracken: Apply when fronds are fully unfurled but prior to first frosts. For boom application, refer to Boom application section. Use Pulse Penetrant at the rate of 100mL per 100L of water.
	Gorse (<i>Ulex europaeus</i>), Lantana (<i>Lantana camara</i>), St John's Wort (<i>Hypericum perforatum</i>), Sweet Briar (<i>Rosa rubiginosa</i>)		400mL TITAN Glyphosate 360 Herbicide plus 3g TITAN Metsulfuron 600 WG Herbicide per 100L water	<p>For Gorse: Apply when actively growing at any time of year, except spring. Use Pulse Penetrant at the rate of 100mL per 100L of water.</p> <p>For Lantana: Apply when actively growing. DO NOT apply during periods of summer drought stress.</p> <p>Use Pulse Penetrant at the rate of 100mL per 100L of water. For St John's Wort, apply when actively growing from spring to summer. Use Pulse Penetrant at 100mL per 100L of water.</p> <p>For Sweet Briar: Apply when in full leaf, prior to leaf fall. Use Pulse Penetrant at 100mL per 100L of water.</p>
* WILL DAMAGE LEGUMES IN PASTURES				

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

WITHHOLDING PERIODS:

MUNG BEANS

Harvest: DO NOT harvest for 7 days after application.

Grazing: DO NOT graze or cut for stock food for 7 days after application.

ALL OTHER CROPS

HARVEST and GRAZING TITAN METSULFURON 600 WG HERBICIDE ONLY: NOT REQUIRED WHEN USED AS DIRECTED.

TITAN METSULFURON 600 WG HERBICIDE MIXTURES – TANK MIXES WITH AGTRYNE, MCPA, 2, 4-D, TITAN DIFLUFENICAN + MCPA, TITAN PICLORAM + MCPA 242, OR TITAN TERBUTRYN 500: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.

TANK MIXES WITH TITAN BROMOXNYL MA: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION.

TANK MIXES WITH DIURON: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 3 DAYS AFTER APPLICATION.

INTRODUCTION

TITAN Metsulfuron 600 WG Herbicide is a selective systemic herbicide absorbed through the leaves and roots of weeds. Good leaf coverage is essential. If washed into the soil within 4 weeks of application, some root uptake can also occur. Root uptake is greatest in alkaline soils. TITAN Metsulfuron 600 WG Herbicide does not provide commercially acceptable soil residual weed control.

Once absorbed, TITAN Metsulfuron 600 WG Herbicide is rapidly translocated throughout the weed inhibiting enzyme acetolactate synthase (ALS). Weeds will stop growing and competing with the crop within 24 hours of spraying. First visible symptom is often wilting of new leaves. Growing points (new leaves) will then discolour and die-back in one to four weeks. Where weeds are not actively growing due to adverse conditions (e.g. severe weather conditions, drought, waterlogging) results may be slow to appear and weeds may be only stunted or suppressed. The duration of weed control is dependent on various environmental conditions e.g. soil pH, temperature, soil moisture and organic matter. Weed control is generally longest in dry, cold, alkaline soils low in organic matter and shortest in wet, warm, acid soils high in organic matter. Generally the duration of weed control decreases with increasing acidity, temperature, moisture and organic matter. Please read this booklet thoroughly before using this product.

SECTION A: WINTER CEREAL CROP SITUATION

GENERAL INSTRUCTIONS

Apply early post crop emergence (3 leaf to before booting) when weeds are small (i.e. no greater than 5cm in height or diameter) and actively growing. Best weed control is obtained when rainfall wets the soil to a depth of 5 to 7.5cm within 4 weeks of application. Where treatment is delayed or where weeds are not actively growing due to adverse conditions, results may be slow to appear and weeds may be only stunted or suppressed. After application for post-emergent weed control, TITAN Metsulfuron 600 WG Herbicide will remain in the soil for a period of time.

The persistence of TITAN Metsulfuron 600 WG Herbicide in the soil is dependent on various environmental conditions, e.g. soil pH, temperature, soil moisture and organic matter. Wet, warm, acid soils high in organic matter favour breakdown of TITAN Metsulfuron 600 WG Herbicide in the soil. It should be noted that TITAN Metsulfuron 600 WG Herbicide does NOT provide soil residual control. Crops other than wheat, barley, triticale and cereal rye may be extremely sensitive to low concentrations of TITAN Metsulfuron 600 WG Herbicide residues in the sprayer or in the soil. See "Sprayer Clean-up" and "Crop Rotation Recommendations."

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT use in winter cereal crops undersown with legume pasture species, e.g. medics, clovers. DO NOT apply to wheat varieties King, Jacup, Miling and Harrier. Care should be taken if it is intended to apply TITAN Metsulfuron 600 WG Herbicide in the same season to a crop already treated with another Sulfonylurea herbicide, e.g. Tackle, as crop damage may occur. Consult your local agronomist. Use of this product on land having a soil pH of 5.5 or less may result in some crop retardation, particularly if the crop is stressed – see comment in point below.

DO NOT apply to crops that are stressed by any cause (such as severe weather conditions, drought, waterlogging, excessive soil acidity or alkalinity, poor nutrient status, disease, nematode or insect damage) as crop injury may result. When treatment is followed by severe stress (such as drought, prolonged cold, waterlogging or frosty conditions) crop yellowing and growth retardation may occur. Crops normally recover without loss in yield. Disease, nematode or insect damage following application may also result in crop injury.

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.

MIXING

Spray Mix: TITAN Metsulfuron 600 WG Herbicide is a water dispersible granule to be mixed with clean water and applied as a spray.

For mixing adhere to the following recommendations: One third fill the spray tank with water and add the required amount of product to the spray tank with the agitator running system engaged. Top up to the correct volume with water. Agitate continuously to ensure thorough mixing before and during application. Only mix sufficient chemical for each day's work.

Tank mixtures: TITAN Metsulfuron 600 WG Herbicide should be added to the partially full spray tank first, followed by dry flowables, suspension concentrates (flowables), aqueous concentrates and then emulsifiable concentrate formulations. This product must be kept in suspension at all times

by continuous agitation. Where prepared spray solutions have been allowed to stand, thoroughly reagituate before using.

GROUND SPRAYING

Use a boom spray properly calibrated to a constant speed and rate of delivery to ensure thorough coverage and a uniform spray pattern. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping as injury to the crop may result. Apply a minimum of 50L prepared spray/ha.

AERIAL SPRAYING

Apply in a minimum of 20L/ha water. Application in a higher water volume of 30L/ha will improve the reliability of weed control efficacy. Avoid spraying in still conditions and in winds likely to cause drift onto adjacent sensitive crops or fallow areas likely to be planted to these crops – see Crop Rotation recommendations. Turn off spray boom whilst passing over creeks and dams. DO NOT apply when a temperature air inversion is likely to occur. Use of Micronair equipment is not recommended due to greater drift potential.

USE OF SURFACTANT/WETTING AGENT

Always add a non-ionic surfactant/wetting agent at a rate of 0.1% (active constituent) of final spray volume e.g. Wetspray 1000 100mL/100L. The use of spraying oils is NOT recommended.

Note: DO NOT add a surfactant/wetting agent when TITAN Metsulfuron 600 WG Herbicide is tank mixed with Terbutryn or Diuron.

COMPATIBILITY (Physical)

TITAN Metsulfuron 600 WG Herbicide is physically compatible with most commonly used broadleaf herbicides including Agtryne, TITAN Bromoxynil MA, LVE MCPA, MCPA Amine, MCPA Ester, 2,4-D Amine, Terbutryne, Tigrex*, Tordon* 242, Tordon 50-D*, Metribuzin, Lontrel L* or TITAN Clopyralid, Dicamba, Starane*, TITAN Diuron 500, Jaguar* and TITAN Glyphosate 450 (glyphosate). TITAN Metsulfuron 600 WG Herbicide is also compatible with most commonly used insecticides, Strike Out* (chlorpyrifos) and Le-Mat* (omethoate).

Temporary crop yellowing may occur when TITAN Metsulfuron 600 WG Herbicide is applied as a tank mix with these insecticides. As formulations of other manufacturers' products are beyond the control of TITAN AG, all mixtures should be tested prior to mixing commercial quantities. Biological compatibility varies between compatible mixtures and weed species.

When using mixtures of TITAN Metsulfuron 600 WG Herbicide plus one of the following herbicides: Puma*, TITAN Diclofop-methyl, Tristar*, Grasp* or Mataven L*, some reduction in grass weed control can be expected to occur (ALL STATES). In heavily weed infested areas control may be inadequate (VIC and TAS only). Significant reduction in grass weed control should be expected (WA and SA only) and/or crop damage may occur (WA only).

Mixtures of TITAN Metsulfuron 600 WG Herbicide and Diclofop methyl/Tristar* are not recommended (WA only). For further information on physical and biological compatibility consult your local agronomist.

CROP ROTATION RECOMMENDATIONS

Minimum recropping intervals for crops are listed below. DO NOT rotate crops other than those mentioned below to land previously treated with TITAN Metsulfuron 600 WG Herbicide, or other metsulfuron-methyl formulations. Crop tolerance (to maturity) should be determined on a small scale before sowing into larger areas. Also refer Crop Safety.



MINIMUM RECROPPING INTERVAL				
Soil pH*	10 days	6 weeks	9 months	14 months
5.6-8.5	Wheat	Barley Cereal Rye Triticale	Chickpeas Faba Beans Linseed Lucerne Lupins Medics** Oats Peas Rapeseed Safflower Subterranean Clover**	Japanese Millet Maize Panorama Millet White French Millet Sorghum Soybeans Sunflower
8.6 and above	Tolerance of crops (grown through to maturity) should be determined on a small scale, in the previous season, before sowing into larger areas.			

*Soil pH is to be determined by laboratory analysis using the 1:5, Soil:water suspension method.

**Involves natural regeneration of subterranean clover and medics.

SECTION B: ESTABLISHED PASURE AND PASTURE RENOVATION

GENERAL INSTRUCTIONS

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

TITAN Metsulfuron 600 WG Herbicide used on established Perennial Phalaris and/or established Perennial Cocksfoot may cause temporary yellowing and some stunting. TITAN Metsulfuron 600 WG Herbicide can severely damage Annual and Perennial Ryegrass. TITAN Metsulfuron 600 WG Herbicide does not control/damage Silvergrass (*Vulpia* spp.), Barley Grass (*Hordeum* spp.), Brome Grass (*Bromus* spp.) or Winter Grass (*Poa* spp.).

Allow weeds to recover from grazing before application. Docks and Sorrel in particular require fresh leaf growth for adequate uptake of chemical. Sorrel seedlings may germinate after the break in the following year, particularly after cultivation. Where treatment is delayed or where weeds are not actively growing due to adverse conditions, results may be slow to appear and weeds may only be stunted or suppressed. Legumes are extremely sensitive to low concentrations of TITAN Metsulfuron 600 WG Herbicide. Ensure that the procedures outlined in the "Sprayer Cleanup" section are followed. The ungerminated clover seed bank is not affected by TITAN Metsulfuron 600 WG Herbicide application. Clover vigour is often increased in the year following application where seed banks are reasonable. The seed set of clover in the year of application of TITAN Metsulfuron 600 WG Herbicide will be significantly reduced particularly from a winter-spring application. This effect may impact on the clover seed bank therefore re-sowing may be necessary. Where clover seed banks are high re-sowing is not necessary. For pasture topping situations a combination of TITAN Metsulfuron 600 WG Herbicide plus RoundUp (glyphosate) can be used, however the Crop Rotation recommendations should be observed. Refer to the Directions of Use section of each product for the appropriate rate and critical comments for the target weed spectrum.

MIXING

Spray Mix: TITAN Metsulfuron 600 WG Herbicide is a water dispersible granule to be mixed with clean water and applied as a spray.

For mixing adhere to the following recommendations: One third fill the spray tank with water and add the required amount of product to the spray tank with the agitator running system engaged. Top up to the correct volume with water. Agitate continuously to ensure thorough mixing before and during application. Only mix sufficient chemical for each day's work.

Tank mixtures: TITAN Metsulfuron 600 WG Herbicide should be added to the partially full spray tank first, followed by dry flowables, suspension concentrates (flowables), aqueous concentrates and then emulsifiable concentrate formulations. This product must be kept in suspension at all times by continuous agitation. Where prepared spray solutions have been allowed to stand, thoroughly reagituate before using.

COMPATIBILITIES

TITAN Metsulfuron 600 WG Herbicide is compatible with the commonly used pasture herbicides MCPA Amine, MCPA Ester, 2,4-D Amine, Lontrel L* or TITAN Clopyralid and the non-selective herbicide Roundup (glyphosate). TITAN Metsulfuron 600 WG Herbicide is compatible with the commonly used pasture insecticides chlorpyrifos (eg. Strike Out*) and omethoate (eg. Le-Mat*).

SURFACTANT/WETTING AGENT

Always add a non-ionic surfactant (1000g ac/L) eg. Wetspray 1000 at 200mL/100L of final spray volume (0.2% volume/volume).

CROP ROTATION RECOMMENDATIONS

TITAN Metsulfuron 600 WG Herbicide treated area may be replanted to any of the specified pasture species after the interval indicated in the following table:

Soil pH*	Pasture species	Rate g/ha	Minimum rainfall	Minimum recrop interval
5.5 and below	Sub-clover (a) and Haifa White Clover	5	150mm	12 weeks
		10		20 weeks
		15		20 weeks
	<i>Cocksfoot</i> spp. and <i>Phalaris</i> spp.	5	100mm	8 weeks
		10		8 weeks
		15		16 weeks
	Perennial Ryegrass and <i>Fescue</i> spp.	5	100mm	16 weeks
		10		16 weeks
		15	150mm	20 weeks
5.6-6.5	Sub-clover (a), Haifa White Clover, Perennial Ryegrass and <i>Fescue</i> spp.	Bioassay(b)		
		5, 10	175mm	12 weeks
	<i>Cocksfoot</i> spp. and <i>Phalaris</i> spp.	15	Bioassay(b)	
6.6 and above	<i>Cocksfoot</i> spp. and <i>Phalaris</i> spp.	Bioassay (b)		

(a) Varieties: Junee, Karridale, Seaton Park and Trikkala.

(b) Tolerance of pasture species should be determined on a small scale, in the previous season, before sowing into larger areas.

* Soil pH is to be determined by laboratory analysis using the 1:5, soil:water suspension method.

SECTION C: BRUSH CONTROL IN PASTURES, RIGHTS-OF-WAY, COMMERCIAL AND INDUSTRIAL AREAS

GENERAL INSTRUCTIONS

Apply when bushes/plants are actively growing. Where treatment is delayed or bushes/plants are not actively growing due to adverse conditions (such as a period of prolonged dry weather) or if partial spray coverage occurs, results may be slow to appear and subsequent regrowth may occur. Should regrowth occur, re-treatment at the recommended rate is advised. Retreatment of blackberries should only be undertaken once regrowth has reached 1 metre tall – this may not be until 2 years after the initial application. For control of bushes previously sprayed with other brush control herbicides or for berries which may have been burned or slashed ensure 2 years have elapsed. Legumes will be removed from pasture if over-sprayed with TITAN Metsulfuron 600 WG Herbicide. Some crops are extremely sensitive to low concentrations of this product. See "Sprayer Clean-up" section. Due to widespread picking of blackberries by the public, it is recommended that the product is not applied to bushes bearing mature fruit.

USE OF SURFACTANT/WETTING AGENTS

Always add a 1000g ac/L (100%) Non-Ionic Surfactant Wetting Agent eg. Wetspray 1000, at a rate of 0.1% Volume/Volume i.e. 100mL/100L prepared spray mixture. Use the surfactant Spraymate Freeway* when recommended in the Directions for Use table and with all gas gun applications (0.2% v/v, i.e. 10mL/5L).

HANDGUN APPLICATION

Spray foliage and canes until wet. Ensure coverage is uniform and complete. Use pressures of 550-750kPa (80-100psi) depending on target species and size of bush. Use larger nozzles and higher pressures for larger bushes. For example:

- Size No. 4 or 5 spray nozzles: small individual bushes or broadleaf weeds less than 1m high.
- Size No. 5 or 6 spray nozzles: medium sized bushes 1-2m high.
- Size No. 7 or 8 spray nozzles: large bushes 2-3m high or of a large diameter.

Note: Use large spray nozzles/high volume for Blackberry regrowth. Spray using a wide cone setting as much as possible. Use even, side-by-side pattern moving up from the base to the top of the bush as leaves are wet. For blackberries, do not ignore runners to the side or the top of the bush and ensure spray penetrates larger bushes to wet foliage and canes.



GAS GUN APPLICATION

Apply to ensure good coverage of all foliage is achieved. The use of a suitable marker dye is recommended e.g. Agmurf White Lightning.

BOOM SPRAY APPLICATION

Use a boom spray properly calibrated to a constant speed or rate of delivery to ensure coverage and uniform spray pattern. Adjust boom height to ensure correct spray overlap. Avoid spraying where drift can move onto crops, areas likely to be planted to crops and non-target pastures as injury may occur. Apply in a minimum of 150L prepared spray/ha. Increase to 200L prepared spray/ha for more dense stands of bracken.

AERIAL APPLICATION (BY HELICOPTER ONLY)

Apply in a minimum of 100L per ha on Blackberries or 60L per ha on *Mimosa pigra* and up to a maximum of 200L prepared spray/ha. Higher water volumes may be necessary to ensure adequate coverage where bushes are large and terrain is steep. Spray with a properly calibrated helicopter using the half overlap opposite pass technique. Avoid spraying in still conditions and where conditions favour temperature inversions. Avoid spraying where drift can move onto crops, areas likely to be planted to crops and non target pastures as injury may occur. Turn off spray booms whilst passing over creeks and dams.

MIXING

Spray Mix: TITAN Metsulfuron 600 WG Herbicide is a water dispersible granule to be mixed with clean water and applied as a spray.

For mixing adhere to the following recommendations: One third fill the spray tank with water and add the required amount of product to the spray tank with the agitator running system engaged. Top up to the correct volume with water. Agitate continuously to ensure thorough mixing before and during application. Only mix sufficient chemical for each day's work.

Tank mixtures: TITAN Metsulfuron 600 WG Herbicide should be added to the partially full spray tank first, followed by dry flowables, suspension concentrates (flowables), aqueous concentrates and the emulsifiable concentrate formulations. This product must be kept in suspension at all times by continuous agitation. Where prepared spray solutions have been allowed to stand, thoroughly reagitrate before using.

IMPORTANT INFORMATION

FOR THE USE OF TITAN METSULFURON 600 WG HERBICIDE IN ALL SITUATIONS SPRAYER CLEAN UP

To avoid subsequent injury to crops or pasture, immediately after spraying thoroughly remove all traces of TITAN Metsulfuron 600 WG Herbicide from mixing and spray equipment as follows:

1. Drain tank, then flush tank, boom and hoses with clean water for a minimum of 10 minutes.
2. Fill the tank with clean water then add 60mL household chlorine bleach (containing 4% chlorine) per 20L of water. Flush through boom and hoses then allow to stand for 15 minutes with agitation engaged, then drain.
3. Repeat step 2.
4. Nozzles and screens should be removed and cleaned separately. To remove traces of chlorine bleach, rinse the tank thoroughly with clean water and flush through hoses and boom.

Caution: DO NOT use chlorine bleach with ammonia. All traces of liquid fertilizer containing ammonia, ammonium nitrate or ammonium sulphate must be rinsed with water from the mixing and application equipment before adding chlorine bleach solution. Failure to do so will release a gas with a musty chlorine odour which can cause eye, nose, throat and lung irritation. DO NOT clean equipment in an enclosed area.

GENERAL INSTRUCTIONS

RESISTANT WEEDS WARNING

TITAN Metsulfuron 600 WG Herbicide is a member of the Sulfonylurea group of herbicides. TITAN Metsulfuron 600 WG Herbicide has the inhibitor of the enzyme acetolactate synthase (ALS) mode of action. For weed resistance management TITAN Metsulfuron 600 WG Herbicide is a Group 2 herbicide. Some naturally occurring weed biotypes resistant to TITAN Metsulfuron 600 WG Herbicide and other Group 2 herbicides are known to 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 Metsulfuron 600 WG Herbicide or other Group 2 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 Metsulfuron 600 WG Herbicide to control resistant weeds. However resistance should not be assumed without first viewing the method of application, the coverage and the timing of application.

GROUP **2** HERBICIDE

If the user suspects that an ALS inhibitor-resistant weed is present, TITAN Metsulfuron 600 WG Herbicide or other Group 2 herbicides should not be used. Strategies to minimise the risk of herbicide resistance are available. Consult your farm chemical supplier, consultant, local Department of Agriculture.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Injury to or loss of desirable trees or vegetation may result from failure to observe the following:

DO NOT apply or drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.

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.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

PROTECTION OF LIVESTOCK

A nil withholding period is applicable for TITAN Metsulfuron 600 WG Herbicide (except for mung beans). It is recommended, however, not to graze treated areas for 3 days to ensure product efficacy.

STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN. DO NOT store the prepared spray for more than 2 days. DO NOT store tank mixes with other products. 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 the 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 for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500mm 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.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with the eyes and skin. When opening the container and preparing spray, wear elbow-length PVC gloves and goggles. If applying by hand wear cotton overalls over normal clothing, buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves. If product on skin, immediately wash area with soap and water. If product or spray in eyes, wash it out immediately with water. Wash hands after use. After each days use, wash gloves, goggles 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 Metsulfuron 600 WG Herbicide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit 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.

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia: Very toxic to aquatic life with long lasting effects. **Precautionary Statements:** Avoid release to the environment. Collect spillage. Dispose of contents/container in accordance with local/regional/national regulations.

* Other trademarks

