

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

MACSPRED

METMACTM 600 HERBICIDE

ACTIVE CONSTITUENT: 600 g/kg METSULFURON METHYL

GROUP	B	HERBICIDE
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For the control of brush and broadleaf weeds in native pastures, rights of way, commercial and industrial areas and for the control of certain broadleaved weeds in winter cereal crops, grass pastures and pasture renovation as per the Directions for Use table.

IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USING THIS PRODUCT.

NET CONTENTS: 200 g [1 kg]

MACSPRED PTY LTD
A.C.N. 011 029 495
13 Kennedy's Drive
DELACOMBE VIC 3350
Tel: 03 5335 8522

TM Macspred Trademark

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

DO NOT apply to weeds growing in or over water.

DO NOT spray across open bodies of water.

PROTECTION OF LIVESTOCK

There is a nil withholding period for this product and stock may continue to graze where the product has been used in pasture situations. It is recommended that stock is removed from the pasture for about 3 days to ensure product efficacy. Certain plants such as bracken are naturally toxic to stock. When toxic plants are present, it is recommended that grazing be delayed until complete browning of treated plants has occurred.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

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 drift onto nearby susceptible plants/crops, cropping lands or pastures.

STORAGE AND DISPOSAL

Keep out of reach of children.

Store in the closed original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and 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 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing spray wear elbow-length PVC gloves and goggles. If applying by hand wears 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 in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves goggles and contaminated clothing.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

For further information, refer to the Material Safety Data Sheet (MSDS), which is available from the supplier.

NOTICE TO BUYER

To the extent permitted by law, all conditions and warranties and statutory or other rights or action which buyer or any other user may have against Macspred or Seller are hereby excluded. Macspred hereby gives Notice to Buyer and other users that it will not accept responsibility for any indirect or consequential loss arising from reliance on product information or advice provided by Macspred or on its behalf unless it is established that such information or advice was provided negligently and that the product has been used strictly as directed. Macspred's liability shall, in all circumstances, be limited to replacement of the product or a refund of the purchase price paid therefor.

APVMA Approval Number: 52735/55073

Batch No:

Date of Manufacture:

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METMAC 600 HERBICIDE

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GROUP	B	HERBICIDE
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For the control of brush and broadleaf weeds in native pastures, rights of way, commercial and industrial areas and for the control of certain broadleaved weeds in winter cereal crops, grass pastures and pasture renovation as per the Directions for Use table.

APVMA Approval No: 52737/55073

This leaflet is part of the label

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DIRECTIONS FOR USE:

TABLE 1

NATIVE PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS

- GROUND APPLICATION

RESTRAINTS:

DO NOT spray if rainfall is expected within 4 hours.

DO NOT store the prepared spray for more than 2 days.

DO NOT store tank mixes with other products.

DO NOT apply to pastures based on *Paspalum notatum* or *Setaria spp.* as their vegetative growth will be reduced.

DO NOT treat newly sown pastures as severe damage may occur.

DO NOT use on pasture seed crops.

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc
		HANDGUN (g/100 L)	BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures **, Rights of Way, Commercial and Industrial Areas	Alligator Weed (<i>Alternanthera philoxeroides</i>)	10	80		Do not apply in aquatic situations. For complete control, follow-up applications are necessary for at least the next two seasons.
	Apple Box (<i>Angophora floribunda</i>), Messmate Stringybark (<i>Eucalyptus obliqua</i>), Narrowleaf Peppermint (<i>E. radiata</i>), Blakely's Red Gum (<i>E. blakelyi</i>), Yellow Box (<i>E. melliodora</i>)	10 + an organosilicone penetrant (200 mL/100 L)		1 + an organosilicone penetrant (10 mL/5 L)	Apply to plants up to 4 m high. Ensure thorough coverage. Avoid spraying when plants are stressed. Results cannot be guaranteed where suckers originate from large lignotubers.
	Australian Blackthorn (<i>Bursaria spinosa</i>)	10		1 + an organosilicone penetrant (10 mL/5 L)	Hand gun - apply to ensure thorough coverage but not to cause run-off.
	Bellyache Bush (<i>Jatropha gossypifolia</i>)	10 + an organosilicone penetrant (200 mL/100 L)			

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc
		HANDGUN (g/100 L)	BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures **, Rights of Way, Commercial and Industrial Areas (cont)	Blackberry (<i>Rubus spp.</i>)	10 + Mineral Crop Oil (1 L/100 L)		1 + an organosilicone penetrant (10 mL/5 L)	Spray to thoroughly wet all foliage and canes. Ensure peripheral runners are sprayed. Tas: Apply after petal fall. Do not apply to bushes bearing mature fruit. Vic: Apply between December and April
	Bitou Bush/Boneseed (<i>Chrysanthemoides monilifera</i>)	10			Minimise contact with desirable plants. Apply to point of run-off.
	Bridal Creeper (<i>Myrsiphyllum asparagoides</i>)	5			Apply from mid-June to late August. To achieve complete control follow-up applications over at least two seasons are required. To minimise damage to native vegetation, water volumes of 500-800 L/ha are recommended.
	Common Bracken (<i>Pteridium esculentum</i>)	10	60		Apply after 75% of fronds are fully expanded. Spray to thoroughly wet all foliage but not to cause run-off. For boom application adjust boom height to ensure complete spray overlap.
	Crofton Weed (<i>Eupatorium adenophorum</i>)	15			Spray to thoroughly wet all foliage but not to cause run-off. When bushes are in thickets ensure good spray penetration. Apply up to early flowering. Best results are obtained on younger plants. Should regrowth occur, re-treat in the next growth period.
	Darling Pea (<i>Swainsona spp.</i>)		10		Spray during spring.
	Fennel (<i>Foeniculum vulgare</i>)	10			
	Golden Dodder (<i>Cuscuta australis</i>)	1			Apply as a spot spray to point of run-off at pre-flowering. Ensure correct coverage of infested area.
	Great Mullein (<i>Verbascum thapsus</i>)		20 + an organosilicone penetrant (200 mL /100 L)		Apply to rosettes during stem elongation during spring when soil moisture is good. Regrowth may occur if plants are treated when growing conditions are not good.

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc
		HANDGUN (g/100 L)	BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures **, Rights of Way, Commercial and Industrial Areas (cont)	Harrisia Cactus (<i>Eriocereus spp.</i>)	20			Spray to thoroughly wet using water volumes of 1,000 - 1,500 L per hectare. A follow-up treatment may be necessary.
	Hawthorn (<i>Crataegus laevigata</i>)	10			Spray to thoroughly wet all foliage but not to cause run-off.
	Inkweed (<i>Phytolacca octandra</i>)	5			
	Japanese Sunflower (<i>Tithonia diversifolia</i>)	10			
	Kangaroo Thorn (<i>Acacia paradoxa</i>)	10			Do not apply to bushes greater than 2.5 m high.
	Mistflower/Creeping Crofton (<i>Eupatorium riparium</i>)	5			Spray to thoroughly wet all foliage but not to cause run-off. Apply up to early flowering.
	Noogoora Burr (<i>Xanthium pungens</i>)	7.5			Plants sprayed under moisture stress will not be controlled.
	Parthenium Weed (<i>Parthenium hysterophorus</i>)	5	7		Hand gun - Spray to thoroughly wet all foliage but not to cause run-off. Boom - For pastures only - Apply up to the rosette stage ensuring thorough spray coverage. Adjust boom height to ensure thorough spray overlap.
	Paterson's Curse/Salvation Jane (<i>Echium plantagineum</i>)	5	15		Hand gun - Spray to thoroughly wet all foliage but not to cause run-off Boom - Adjust boom height to ensure correct overlap. WA only: Apply up to early flowering ie August - September.
	Privet (<i>Ligustrum spp.</i>)	10		1 + an organosilicone penetrant (10 mL/5 L)	Do not apply to bushes more than 3 m tall. Ensure complete spray coverage. Complete foliar spray coverage is essential for control; partial spray coverage will result in recovery.
	Ragwort (<i>Senecio jacobaea</i>)	5	15		Apply to plants at the rosette to cabbage stage.
Rubber Vine (<i>Cryptostegia grandiflora</i>)	15			Do not apply to bushes more than 3 m tall. Apply October to April, ensuring thorough spray coverage of all foliage and leaders. Incomplete coverage will result in re-growth. DO NOT treat plants infected with rust.	

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc
		HANDGUN (g/100 L)	BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures **, Rights of Way, Commercial and Industrial Areas (cont)	Smartweed (<i>Polygonum spp.</i>)	10	10		
	Sweet Briar (<i>Rosa rubiginosa</i>)	10		1 + an organosilicone penetrant (10 mL/5 L)	Do not apply when bushes are stressed, when leaf fall has commenced or after the end of February. Hand gun - Spray to thoroughly wet all foliage but not to cause run-off. Vic only – Gas gun: Do not apply to bushes more than 2 m tall. Apply with shots of 25 mL of dilute product.
	Wait-A-While (<i>Caesalpinia decapeltata</i>)	10			
	Wild Turnip (<i>Brassica tournefortii</i>)	5			

* ALWAYS ADD A SURFACTANT/WETTING AGENT

** LEGUMES IN THE PASTURE WILL BE DAMAGED

TABLE 2.**PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS****- AERIAL APPLICATION BY HELICOPTER****RESTRAINTS:**

DO NOT spray if rainfall is expected within 2 hours of spraying.

DO NOT store tank mixes with other products.

DO NOT store the prepared spray for more than 2 days.

SITUATION	WEEDS CONTROLLED	STATES	RATE * (g/ha)	CRITICAL COMMENTS
Pastures **, Rights of Way, Commercial and Industrial Areas	Blackberry (<i>Rubus spp.</i>)	NSW, Tas, Vic only	160	FOR ALL WEEDS: Apply when weeds are actively growing and not stressed by conditions such as waterlogging, moisture etc Ensure all foliage is thoroughly covered including peripheral runners. Use at least 100 L of prepared spray per hectare. Tas: Apply after petal fall. Do not apply to bushes bearing mature fruit. Vic: Apply between December and April
Flood plains	<i>Mimosa pigra</i>	NT only	50 or 60	Use the higher rate when air temperature exceeds 35°C. Apply in at least 60 L/ha of clean water. Use D6 or D8 nozzles with 45 swirl plates pressurised to 210 kPa to give large droplet size. Add a non-ionic surfactant.

* ALWAYS ADD A SURFACTANT / WETTING AGENT

** LEGUMES IN THE PASTURE WILL BE DAMAGED

TABLE 3.**NATIVE PASTURES, FORESTRY, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS, DOMESTIC AND PUBLIC SERVICE AREAS
- MACSPRED METMAC 600 + MACSPRED GLYMAC 360 TANK MIX****(always refer to First Aid, Safety Directions, Resistant Weeds Warning and any other restrictions for Macspred Glymac 360)****FOR ALL STATES****RESTRAINTS:****DO NOT** apply if rainfall is expected within 6 hours of spraying.**DO NOT** store tank mixes with other products.**DO NOT** store the prepared spray for more than 2 days.**DO NOT** apply to plants wet with dew or rain or if droplets run-off when plants are disturbed.

SITUATION	WEEDS CONTROLLED	RATE ALWAYS ADD AN ORGANOSILICONE PENETRANT		CRITICAL COMMENTS For All Weeds: Apply when target weed is in active growth and not under stress from water logging, drought etc. Results may be slow to appear and may not be visible for 3-6 weeks. Full brown-out may take 3-6 months.
		BOOM OR AERIAL	HAND GUN OR KNAPSACK	
Native Pastures **, Forestry, Rights of Way, Commercial and Industrial Areas, Domestic and Public Service Areas	Blackberry (<i>Rubus spp</i>)	60 g + 8 L Macspred Glymac 360 per ha	3 g + 400 mL Macspred Glymac 360 per 100 L 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 organosilicone penetrant (e.g. Pulse) at the rate of 100 mL per 100 L of water
	Bracken (<i>Pteridium esculentum</i>)	30 g + 4 L Macspred Glymac 360 per ha		For Bracken, apply when fronds are fully unfurled but prior to first frosts. For boom application, refer to boom application section. Use organosilicone penetrant (e.g. Pulse) at the rate of 100 mL per 100 L of water
	Gorse (<i>Ulex europaeus</i>)			For Gorse, apply when actively growing at any time of the year, except Spring. Use organosilicone penetrant (e.g. Pulse) at the rate of 100 mL per 100 L of water
	Lantana (<i>Lantana camara</i>)			For Lantana, apply when actively growing. DO NOT apply during periods of Summer drought stress. Use organosilicone penetrant (e.g. Pulse) at the rate of 100 mL per 100 L of water
	St Johns Wort (<i>Hypericum perforatum</i>)			For St. John's Wort, apply when actively growing from Spring to Summer. Use organosilicone penetrant (e.g. Pulse) at the rate of 100 mL per 100 L of water
	Sweet Briar (<i>Rosa rubiginosa</i>)			For Sweet Briar, apply when in full leaf, prior to leaf fall. Use organosilicone penetrant (e.g. Pulse) at the rate of 100 mL per 100 L of water

** LEGUMES IN THE PASTURE WILL BE DAMAGED

TABLE 4.**NATIVE PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS, DOMESTIC AND PUBLIC SERVICE AREAS
- MACSPRED METMAC 600 + MACSPRED GLYMAC™ 360 TANK MIX****(always refer to First Aid, Safety Directions, Resistant Weeds Warning and any other restrictions for Macspred Glymac 360)****FOR ALL STATES****RESTRAINTS:****DO NOT** apply if rainfall is expected within 6 hours of spraying.**DO NOT** store tank mixes with other products.**DO NOT** store the prepared spray for more than 2 days.**DO NOT** apply to plants wet with dew or rain or if droplets run-off when plants are disturbed.

SITUATION	WEEDS CONTROLLED	STATES	RATE per 100 L HANDGUN OR KNAPSACK Always add a non-ionic surfactant unless otherwise specified	CRITICAL COMMENTS Results may be slow to appear and may not be visible for 3-6 weeks. Full brown-out may take 3-6 months.
Native Pastures **, Rights of Way, Commercial and Industrial Areas, Domestic and Public Service Areas	Apple Box (<i>Angophora floribunda</i>)	NSW only	10 g + 200 mL Macspred Glymac 360 + organosilicone penetrant (200 mL/100 L)	Spray plants up to 4 m high ensuring thorough coverage. Plants growing from large lignotubers may not be controlled
	Australian Blackthorn (<i>Bursaria spinosa</i>)	NSW, Qld, Vic, Tas only	10 g + 200 mL Macspred Glymac 360	Spray to point of run off.
	Bitou Bush/Boneseed (<i>Chysanthemoides monilifera</i>)	NSW, Qld, Vic, SA only		Ensure thorough coverage. Minimise contact with desirable species.
	Blackberry (<i>Rubus spp.</i>)	All States		Ensure thorough coverage. Peripheral runners must also be covered to minimise regrowth. Apply between January and April when bushes are actively growing. TAS ONLY: Apply after petal fall. Do not apply to bushes bearing mature fruit.
	Messmate Stringybark (<i>E. obliqua</i>) Narrowleaf Peppermint (<i>E. radiata</i>) Blakely's Red Gum (<i>E. blakelyi</i>) Yellow Box (<i>E. melliodora</i>)	NSW only	10 g + 200 mL Macspred Glymac 360 + organosilicone penetrant (200 mL/100 L)	Spray plants up to 4 m high. Trees growing from large lignotubers may not be controlled.
	Gorse (<i>Ulex europaeus</i>)	NSW, Vic, Tas, SA only		Ensure thorough coverage and penetration of spray into the bush. Apply to plants up to 2 m tall.
	Hawthorn (<i>Crataegus leavigata</i>)	NSW only	10 g	Spray to point of run off.
	Lantana (<i>Lantana camara</i>)	NSW, Qld only	+ 200 mL Macspred Glymac 360	Ensure thorough coverage and penetration of spray into the bush. Apply to plants up to 2 m tall.

SITUATION	WEEDS CONTROLLED	STATES	RATE per 100 L HANDGUN OR KNAPSACK Always add a non-ionic surfactant unless otherwise specified	CRITICAL COMMENTS Results may be slow to appear and may not be visible for 3-6 weeks. Full brown-out may take 3-6 months.
	Privet (<i>Ligustrum spp.</i>)	NSW, Qld only		Apply to bushes up to 3 m high. Ensure thorough coverage. If plants are not adequately covered plants may not be controlled.
	St John's Wort (<i>Hypericum perforatum</i>)	NSW, Vic, SA, WA only		Spray to wet all foliage, but not to cause run-off.
	Sweet Briar (<i>Rosa rubiginosa</i>)	NSW, VIC, Tas SA only		Do not apply after leaf fall has commenced or after the end of February. Spray foliage to point of run-off.
	Tree of Heaven (<i>Ailanthus altissima</i>)	NSW only		

** LEGUMES IN THE PASTURE WILL BE DAMAGED

TABLE 5**ESTABLISHED PASTURES AND PASTURE RENOVATION****RESTRAINTS:**

DO NOT spray if rainfall is expected within 4 hours.

DO NOT store the prepared spray for more than 2 days.

DO NOT store tank mixes with other products.

DO NOT apply to newly sown pastures as severe damage may result.

DO NOT apply to weeds under stress or that are not actively growing.

DO NOT use on crops grown for pasture seed.

CROPS	WEEDS CONTROLLED	STATE	RATE (g/ha)	CRITICAL COMMENTS
ESTABLISHED PASTURES	Annual Clover (<i>Trifolium</i> spp.)	All States	5	Apply before flowering.
TOLERANT GRASS SPECIES	Annual Medics (<i>Medicago</i> spp.)	NSW, Vic, SA, Tas, WA only	5	For best results apply before flowering.
	Cape Tulip: Both one and two leaf (<i>Homeria</i> spp.)	NSW, Vic, SA, Tas, WA only	5	Apply at bulb exhaustion usually during July/early August. Repeat application may be required to obtain control.
Perennial phalaris and Perennial cocksfoot (Stands must be older than 1 year)	Docks (<i>Rumex</i> spp.)	All States	5 (seedlings) 10 (established)	For best results apply in spring prior to bolting.
	Doublegee (<i>Emex australis</i>)	WA only	5 or 10	Use the higher rate on dense infestations. Apply up to the 6 leaf stage.
OR	Erodium/Storksbill/Wild Geranium (<i>Erodium</i> spp.)	NSW, Vic, SA, Tas only		Use the higher rate on dense infestations. Apply before flowering.
PASTURE RENOVATION Use to reduce weeds in established pastures before sowing a new pasture the following season	Onion grass/Guildford Grass (<i>Romulea rosea</i>)	NSW, Vic, Tas, SA, WA only	15	Apply at bulb exhaustion usually late June/July before the onset of browning off caused by Helminthosporium fungus. If mixing with glyphosate use 10 g/ha.
	Paterson's Curse/Salvation Jane (<i>Echium plantagineum</i>)	All States	10 or 15	Use the lower rate on small plants and the higher rate before bolting/flowering.
	Ragwort (<i>Senecio jacobaea</i>)	NSW, Vic, SA, Tas only	15	Apply at the rosette to cabbage stage when plants are actively growing.
	Sorrel (<i>Rumex acetosella</i>)	NSW, Vic, SA, Tas, WA only	5 (seedlings) 10 (established)	For best results apply in spring before seed heads appear.
	Soursob (<i>Oxalis pes-caprae</i>)		5 or 10	For best results apply before flowering. Use the higher rate on dense stands.
	Wild Garlic (<i>Allium vineale</i>)		15	Apply at bulb exhaustion usually during July/ early August. Repeat application may be required to obtain control.

TABLES 6, 7 & 8

WINTER CEREAL CROPS

DIRECTIONS FOR USE:

RESTRAINTS:

DO NOT apply to crops under stress.

DO NOT spray if rainfall is expected within 2 hours.

DO NOT store the prepared spray for more than 2 days.

DO NOT store tank mixes with other products.

DO NOT apply to crops before the three leaf stage when used post emergent.

DO NOT use on flood or furrow irrigated crops.

TABLE 6

CEREALS - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION

- MACSPRED METMAC 600 ONLY

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale, Wheat	African Turnip Weed (<i>Sisymbrium thellungii</i>)	Qld only	5	Apply before the 6 leaf stage
	Amsinckia/Yellow Burrweed (<i>Amsinckia</i> spp.)	WA only	5	
		NSW, Vic, Tas, SA only	5 or 7	Use the higher rate for heavy weed pressure or for larger weeds
	Ball Mustard (<i>Neslia paniculata</i>)	SA only	5	
	Boggabri Weed/Dwarf Amaranth (<i>Amaranthus macrocarpus</i>)	Qld only	7	Apply at cotyledon to 10 cm height or diameter
	Calomba 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, Tas, Vic only	Apply up to the 4 leaf stage		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye Triticale, Wheat (cont.)	Cutleaf Mignonette (<i>Reseda lutea</i>)	Tas, SA only	7	Spray large, actively growing plants up to the early flowering stage. Plants which emerge after spraying may not be controlled.
	Deadnettle (<i>Lamium amplexicaule</i>)	All States	5	
	Denseflower Fumitory (<i>Fumaria densifolia</i>)	NSW, SA only		
	Dock (Broadleaf) (<i>Rumex obtusifolia</i>)	WA only		Use the higher rate where weed pressure is high. Apply after the 3 node stage
		Qld, NSW, Vic, Tas, SA only	5 or 7	Apply after the 3 node stage
	Faba Beans (<i>Vicia faba</i>)	Vic, SA only	5	
	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 before the 5 leaf stage
		WA only		Apply before the 4 leaf stage
	Hogweed/Wireweed (<i>Polygonum aviculare</i>)	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 to 3 leaf stage
	Indian Hedge Mustard (<i>Sisymbrium orientale</i>)	All States	5	Heavy populations and/or those suffering from moisture stress may not be completely controlled. A tank mix with MCPA is recommended
	Lincoln Weed (<i>Diploaxis tenuifolia</i>)	SA only	7	Apply from late winter to early spring. Plants must be actively growing. Plants emerging after spraying may not be controlled
	Lupins (<i>Lupinus albus</i>)	NSW, Vic SA, WA only	5	
	Mallee Catchfly (<i>Silene apetala</i>)	SA only		
	Medics (<i>Medicago spp.</i>)	All States		
	New Zealand Spinach (<i>Tetragonia tetragonioides</i>)	Qld only	7	Apply before the 4 leaf stage
	Parthenium Weed (<i>Parthenium hysterophorus</i>)	Qld only	5 or 7	Apply the lower rate before the 4 leaf stage and the higher rate at the 4 leaf to rosette stage
	Paterson's Curse/Salvation Jane (<i>Echium plantagineum</i>)	WA, Tas only	5	
		NSW, SA only	5 or 7	Use the higher rate for large weeds or heavy weed populations
Prickly Lettuce (<i>Lactuca serriola</i>)	Qld, Vic, Tas, SA only		Use the higher rate for larger weeds or heavy weed pressure.	
	WA only	5		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale Wheat (cont.)	Red Pigweed (<i>Portulaca oleracea</i>)	Qld only	5	Apply before the 6 leaf stage
			7	Apply 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 lower rate at 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		
	Soursob (<i>Oxalis pes-caprae</i>)	NSW, Vic, Tas, SA, WA only		
	Spiny Emex/Doublegee/ Three Cornered Jacks (<i>Emex australis</i>)	WA only		
		Qld, NSW, Vic, Tas, SA only	5 or 7	Use the higher rate under heavy weed pressure
	Stagger Weed (<i>Stachys arvensis</i>)	All States	5	
	Storksbill/Wild Geranium (<i>Erodium spp.</i>)	Vic, Tas, SA, WA, only		
	Turnip Weed (<i>Rapistrum rugosum</i>)	All States		
	Volunteer Sunflower (<i>Helianthus annuus</i>)	Qld only	5 or 7	Use the lower rate at the cotyledon to 4 leaf stage and the higher rate at the 4-8 leaf stage
		NSW only	7	Apply at the cotyledon to 8 leaf stage
	Wild/Crow Garlic (<i>Allium vineale</i>)	Vic, Tas only		Apply at the 1-2 leaf stage
	Wild Turnip (<i>Brassica tournefortii</i>)	All States	5	

TABLE 7
CEREALS – POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION
- MACSPRED METMAC 600 MIXTURES

CROP	WEEDS CONTROLLED	STATES	RATE (/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Barley, Wheat	Capeweed (<i>Arctotheca calendula</i>)	SA only	5 g + 550 mL Terbutryn	3 leaf to early tillering (Zadoks 13-21)	Apply when weeds are 2 to 6 leaf
		NSW only	5 g + 850 mL Terbutryn		
Barley, Cereal Rye, Triticale, Wheat	Capeweed (<i>Arctotheca calendula</i>)	NSW, Vic, SA, WA only	5 g + 1 L Terbutryn/MCPA	3 leaf to early tillering (Zadoks 13-21)	Apply when weeds are 2 to 6 leaf
		WA only	5 g + 750 mL Bromoxynil/MCPA	3 leaf to full tillering (SA, WA only) 5 leaf to full tillering (Qld, NSW, Vic, Tas only)	Apply when weeds are up to 6 leaf stage
		Qld, NSW, Vic, Tas, SA only	5 g + 1.4 L Bromoxynil/MCPA		
		WA only	5 g + 1.4 L Bromoxynil/MCPA	3 leaf to full tillering (SA, WA only) 5 leaf to full tillering (Qld, NSW, Vic, Tas only)	Apply when weeds are 6-8 leaf stage
		Qld, NSW, Vic, Tas, SA only	5 g + 2.1 L Bromoxynil/MCPA		
Wheat, Barley	Wild Radish (<i>Raphanus raphanistrum</i>)	WA only	5 g + 250 mL MCPA Ester /Diflufenican	Wheat: 3 leaf to late tillering (Zadoks 13-20) Barley: 5 leaf to late tillering (Zadoks 15-30)	Apply up to the 4 leaf stage and not more than 10 cm in diameter
Wheat, Barley, Cereal Rye, Triticale	Wild Radish (<i>Raphanus raphanistrum</i>)	NSW, Vic, Tas, SA, WA only	5 g + 1.1 to 1.6 L LVE MCPA	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	5 g + 1.1 to 1.6 L LVE MCPA	5 leaf to commencement of flag leaf (Zadoks 15-37)	Spray young rosettes before leaves become spiny
		NSW, Vic, Tas, SA, WA only	5 g + 300 mL Clopyralid (300 g/L)	4 to 5 leaf stage (Zadoks 14-15)	Spray when weeds are young and actively growing. DO NOT apply Lontrel to a cereal crop if field peas are to be sown the following season unless cereal stubble is to be burnt

CROP	WEEDS CONTROLLED	STATES	RATE (/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
	Variegated Thistle (<i>Silybum marianum</i>)	Tas only*	5 g + 1.5 L 2,4-D Amine (500 g/L)	5 leaf to early tillering (Zadoks 15-21)	Apply to weeds at seedling to rosette stage
		NSW only	5 g + 700 mL to 1.7 L 2,4-D Amine (500 g/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 the seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds
		Qld only	5 g + 1.1 L 2,4-D Amine (500 g/L)	Mid tillering to before boot (Zadok 23-39)	Apply to weeds at the seedling to rosette stage
		NSW, Vic, Tas, SA, WA only	5 g +840 mL LVE MCPA Amine	Apply from 5 leaf through to commencement of flag leaf (Zadoks 15-37)	Spray at pre-cabbage stage
Wheat	Slender Thistle (<i>Carduus tenuiflorus</i>)	NSW only	5 g + 2.1 L LVE MCPA		Moderately susceptible. Spray young rosettes
Wheat, Barley, Cereal Rye, Triticale		NSW only	5 g + 1 L to 1.7 L 2,4-D Amine (500 g/L)	Apply after the first node can be felt in the base of the tiller and before the swelling of the head can be felt in the tiller	Apply to weeds at the seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds
	Slender Thistle (<i>Carduus tenuiflorus</i>) and <i>C. pycnocephalus</i>	Tas only*	5 g + 1.7 L 2,4-D Amine (500 g/L)	5 leaf to early tillering (Zadoks 15-21)	Apply to weeds at seedling to young rosette stage
Wheat, Barley, Triticale	Black Bindweed/Climbing Buckwheat (<i>Polygonum convolvulus</i>)	Qld, NSW only	5 or 7 g + 1 L MCPA/Picloram K Salts	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 more 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 grapevines through spray or vapour drift.

TABLE 8
CEREALS - FALLOW/PREPLANT KNOCKDOWN
- MACSPRED METMAC 600 + GLYPHOSATE

CROP	WEEDS CONTROLLED	STATES	RATE (/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat	Refer to Post Crop and Weed Emergence section of this label and Glyphosate Directions for Use	All States except WA	5 or 7g + Glyphosate at label rates	Refer to Post Crop and Weed Emergence section of this label and Glyphosate Directions for Use	DO NOT apply less than 10 days before sowing as crop injury may occur, particularly if conditions are dry and cold. Apply when weeds are actively growing. Refer to Critical Comments and General Instructions of both labels. Use the appropriate rate of each product for the target weed.
		WA only	5 g + Glyphosate at label rates		
Barley, Cereal Rye, Triticale	All States except WA	5 or 7g + Glyphosate at label rates	DO NOT apply at less than 6 weeks before sowing as crop injury may occur, particularly if conditions are dry and cold. Apply when weeds are actively growing. Refer to Critical Comments and General Instructions of both labels. Use the appropriate rate of each product for the target weed.		
	WA only	5 g + Glyphosate at label rates			

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

WITHHOLDING PERIODS:

CEREALS:

Macspreed Metmac 600 Herbicide Only and with Glyphosate

– NOT REQUIRED WHEN USED AS DIRECTED

Mixtures with 2,4-D, Diflufenican/MCPA Ester, MCPA, MCPA/Picloram K Salts, Terbutryn, Terbutryn/MCPA

– DO NOT CUT OR GRAZE FOR STOCK FOOD FOR 7 DAYS AFTER TANK MIX APPLICATION

Mixtures with Diuron Flowable

– DO NOT CUT OR GRAZE FOR STOCK FOOD FOR 3 DAYS AFTER TANK MIX APPLICATION

Mixtures with Bromoxynil//MCPA

– DO NOT CUT OR GRAZE FOR STOCK FOOD FOR 14 DAYS AFTER TANK MIX APPLICATION

PASTURES AND ALL OTHER USE SITUATIONS:

– NOT REQUIRED WHEN USED AS DIRECTED

GENERAL INSTRUCTIONS

– NATIVE PASTURES, FORESTRY, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS, DOMESTIC AND PUBLIC SERVICE AREAS, ESTABLISHED PASTURES AND PASTURE RENOVATION

MACSPRED METMAC 600 Herbicide is a selective herbicide which is rapidly absorbed by root and leaves.

- Always add a surfactant/wetting agent.
- Best results are achieved when:
 - application is made to actively growing plants which are not stressed by any factors such as dry weather conditions, waterlogging etc. Application to weeds that are not actively growing due to adverse conditions may result in weeds only being stunted or suppressed.
 - plants to be treated are thoroughly covered. This is essential to achieve maximum herbicide uptake.
- Regrowth may occur if the product is applied when plants are stressed or if complete spray coverage is not achieved. If regrowth does occur, re-treatment at the rates on this label is recommended. For blackberries re-treatment should only be undertaken if plants are at least 1 m tall. This may not be until 2 years after the initial application.
- Legumes will be removed from pasture if oversprayed with MACSPRED METMAC 600 Herbicide.
- If weeds have been previously sprayed with other herbicides or if the weeds have been burned or slashed ensure 2 years have elapsed before treating with MACSPRED METMAC 600 Herbicide.
- It is recommended that this product not be applied to bushes bearing mature blackberries due to the collection of blackberries for food purposes.
- Introduced grass species may be severely damaged if oversprayed.
- Some grasses will be damaged in pasture sprayed with this product and biomass production may be reduced for several months.
- Some temporary yellowing and some stunting may occur when used on Perennial Phalaris and/or established Perennial cocksfoot.
- ALL grasses and legumes can be damaged and/or removed by a MACSPRED METMAC 600 Herbicide/Glyphosate mixture.
- The following weeds will not be controlled: Barley grass (*Hordeum leporinum*), Brome grass (*Bromus unioloides*), Silvergrass (*Vulpia* spp.), Winter Grass (*Poa annua*).
- Best results will be achieved if weeds are allowed to recover from grazing prior to herbicide application to allow for adequate uptake of the product. Sorrel and Docks particularly require new leaf growth.

INSTRUCTIONS SPECIFIC TO ESTABLISHED PASTURES AND PASTURE RENOVATION

- Some sorrel seedlings may germinate after the break in the following year.
- Ungerminated clover will not be affected but seed set in the year following application will be significantly reduced. If seed banks are not large, it may be necessary to re-sow clover.
- For Pasture Topping situations this product may be mixed with glyphosate but ensure crop rotation recommendations are observed. Refer to the Directions for Use for each target weed on each product label.

Spray Preparation

MACSPRED METMAC 600 Herbicide is a dry flowable granule which must be mixed with clean water. Always add a wetting agent/surfactant. (See “Use of surfactant/wetting agent” below)

1. Partially fill the spray tank with water.
2. With the agitation system engaged, add the required amount of product (as per Directions for Use Table) to the tank using only the measuring device provided.
3. Add the remainder of the water.
4. Always maintain agitation to keep the product in suspension. If the spray solution is allowed to stand, thoroughly re-agitate before using.

If tank mixing with another product, ensure Macspred Metmac 600 Herbicide is in suspension before adding the other product to the tank.

If using in conjunction with liquid fertilisers, slurry the product in water before mixing the slurry into the liquid fertiliser. Do not add surfactants and check with the Department of Agriculture on compatibility.

Use of Surfactant/Wetting Agent

MACSPRED METMAC 600 Herbicide alone - It is important that a surfactant/wetting agent is **ALWAYS** used with this product. If no specific wetting agent/surfactant is recommended in the Directions for Use table, use a non-ionic surfactant (100%) at 100 mL/100 L of final spray volume.

MACSPRED METMAC 600 Herbicide tank mixed with Glyphosate - Use a non-ionic surfactant when mixing with Glyphosate. In some tank mix situations the use of an organosilicone penetrant (e.g. Pulse¹) is recommended. This recommendation must be strictly followed in order to achieve adequate weed control.

Gas Gun Applications - An organosilicone penetrant (e.g. Pulse¹) should be added at the rate of 10 mL/5 L or 200 mL/100 L of final spray volume.

Where a mineral spray oil is recommended use 1 L/100 L of final spray volume (i.e. 1% volume/volume). A non-ionic surfactant should still be used with this mixture.

Always read the instructions on the companion product label when tank mixing.

Application Equipment

MACSPRED METMAC 600 Herbicide may be applied by air, hand gun, boom spray or gas gun according to the Directions for Use Table.

Hand Gun - Ensure complete and uniform coverage of all canes and foliage. Pressures of 550-750 kPa (80-100 psi) are recommended depending on size of bushes and target species. As an example:

Use No. 4 or 5 spray nozzle for individual bushes or broadleaf weeds less than 1 m high. Use No. 5 or 6 spray nozzle for bushes 1-2 m high and No. 7 or 8 spray nozzle for large bushes 2-3 m high or for bushes with a large diameter. When using 3 g MACSPRED METMAC 600 Herbicide + 400 mL of Macspred Glymac 360 Herbicide pressures of greater than 800 kPa should be used to assist penetration.

NOTE: For blackberry regrowth use the large spray nozzle/ high volume with as wide a cone setting as possible. Use even, side by side spray pattern moving from the base to the top of the bush. For blackberries it is important that runners at the side and top of the bush are treated and that spray penetrates larger bushes to wet the foliage and canes.

Boom Spray - Ensure the boom is properly calibrated to a constant speed or rate of delivery for thorough coverage and uniform spray pattern. Fan nozzles using pressures of 240 to 280 kPa are recommended. Adjust the boom height to ensure correct spray overlap. Apply in a minimum of 150 L prepared spray per hectare. Increase to 200 L/ha or more for dense stands.

Gas Gun - Ensure thorough coverage. The use of a suitable dye is recommended to allow the operator to see which plants have been treated.

Aerial Application (by helicopter only) - Use a properly calibrated helicopter using the half overlap opposite pass technique. Apply a minimum of 100 L/ha on blackberries and 60 L/ha on *Mimosa pigra* up to a maximum of 200 L prepared spray per hectare. Use a VMD of 300 microns. High temperatures and/or low humidity may cause excessive evaporation of droplets and may reduce results. Where bushes are large or terrain is steep, higher water volumes are necessary to ensure adequate coverage. Avoid spraying in conditions which favour temperature inversions or in still conditions. Turn off boom when passing over creeks, dams or waterways. Avoid spraying where drift can move onto crop areas that are likely to be planted to crops and non target pastures as injury may occur. Do not apply when temperatures exceed 30⁰C (except when treating *M. pigra*).

Tank Mixes with Macspred Glymac 360 Herbicide

In certain situations such as the presence of harder to kill species or in follow-up treatment situations a tank mix with Macspred Glymac 360 may provide improved weed control (see Directions for Use table).

Compatibility

This product is compatible with glyphosate formulations and commonly used pasture herbicides such as diuron, simazine, Clomac/Lontrel, hexazinone, atrazine, MCPA ester, 2,4-D amine, dicamba, clopyralid, fluroxypyr and commonly used insecticides such as chlorpyrifos and omethoate. Always refer to the companion product label for Instructions/Restrictions. For further information contact your Macspred representative.

CROP ROTATION RECOMMENDATIONS

Many crop species are sensitive to metsulfuron methyl. The product is broken down in the soil mainly by chemical hydrolysis and to a lesser degree by soil microbes. Other factors which affect breakdown are soil pH, soil moisture and temperature. Breakdown is faster in warm, wet acid soils and slowest in alkaline, cold, dry soils.

Other species which are sensitive to metsulfuron methyl are:

Barley, Canola, Cereal Rye, Chickpeas, Faba Beans, Japanese Millet, Linseed, Lupins, Lucerne, Maize, Medics, Oats, Panorama Millet, Peas, Safflower, Sorghum, Soybeans, Sub Clover, Sunflower, Triticale, Wheat, White French Millet.

If it is planned to plant a crop on an area previously treated with MACSPRED METMAC 600 Herbicide, it is recommended that a small area only be sown to ascertain if the herbicide has broken down in the soil.

The use of this product may prevent re-establishment of legumes and grasses after treatment. The length of time that residues may persist in the soil will vary according to site conditions such as climate, soil pH, soil micro organisms, soil moisture, soil temperature and the rate of product used.

The following table gives the length of time before a specific pasture can be re-planted after MACSPRED Metmac 600 Herbicide application.

Soil pH*	Pasture Species	Rate g/ha	Minimum rainfall	Minimum recrop interval
5.5 and below	Sub clover ^(a) and Haifa white clover	5	150 mm	12 weeks
		10		20 weeks
		15		20 weeks
	Cocksfoot spp. and <i>Phalaris</i> spp.	5		8 weeks
		10		8 weeks
		15		16 weeks
	Perennial Ryegrass spp. and <i>Fescue</i> spp.	5	100 mm	16 weeks
		10		16 weeks
		15	150 mm	20 weeks
5.6 – 6.5	Sub clover ^(a) and Haifa white clover, Perennial Ryegrass spp. and <i>Fescue</i> spp.	Bioassay ^(b)		
		5, 10	175 mm	12 weeks
	Cocksfoot spp. and <i>Phalaris</i> spp.	15	Bioassay ^(b)	
6.6 and above	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. DO NOT replant any other crop without contacting a Macspred representative.

For rates higher than 15 g/ha the following applies:

- For soils with a pH below 7 (1:5 soil:water method) a minimum period of 12 months should elapse before oversowing treated areas with grasses or legumes. It is suggested that small areas be oversown 1-2 months prior to the planned time for sowing to check for possible harmful residues.
- For soils with a pH greater than 7 or if planting another crop, DO NOT replant any other crop without contacting a Macspred representative.

GENERAL INSTRUCTIONS

- CEREAL CROPS

Macspred Metmac 600 Herbicide is a selective herbicide which can be used in cereal crops at the early post emergence stage of the crop (3 leaf to before booting stage). It may also be applied before planting the crop i.e. pre-plant.

- Best results are obtained if weeds are small (no larger than 5 cm in height or diameter) and actively growing. To achieve good weed control, it is preferable that rainfall wets the soil to a depth of 5 to 7.5 cm within 4 weeks of application. If application is not made when conditions and weed growth are optimum, results may be slow to appear and some weeds may only be suppressed or stunted.
- For post emergent application, the product will remain in the soil for a period of time. The soil persistence will depend on environmental conditions such as soil pH, moisture, temperature and soil organic matter. Breakdown is faster in warm, wet acid soils and slowest in alkaline, cold, dry soils. This product does NOT provide acceptable residual control.

Crop Safety

- Do not apply to the wheat varieties Miling, Jacup, King or Harrier.
- Do not apply to crops undersown with legumes as legumes will be seriously affected by the product. Should the crop have been treated with another sulfonylurea herbicide e.g. chlorsulfuron, consult your local representative or Department of Agriculture before application of Macspred Metmac 600 Herbicide as crop injury may occur.
- Do not apply to crops that are stressed by any factor such as adverse environmental conditions, waterlogging, drought, frost, poor nutrient status, extreme acid or alkaline soil conditions, insect or nematode damage. Crop injury may occur if the product is applied to these crops. If the crop is stressed after application of the herbicide, crop yellowing and slow growth may occur but the final yield is normally unaffected as the crop will recover. Application to soils with pH 5.5 or less may result in some crop retardation, especially if the crop is stressed.

Application Equipment

For control of weeds in winter cereal crops the product may be applied by ground or air.

Ground Spraying

Ensure the boom is properly calibrated to a constant speed or rate of delivery for through coverage and uniform spray pattern. Avoid overlapping and shut off boom while starting, turning, slowing or stopping as injury to the crop may occur. Apply in a minimum of 50 L prepared spray/ha.

Aerial Application

Apply in a minimum of 20 L/ha. Application in higher water volumes may improve weed control reliability. Avoid spraying in conditions which favour temperature inversions, still conditions, or in winds likely to cause drift onto sensitive crops or fallow areas to be planted to sensitive crops. Turn off boom when passing over creeks, dams or waterways. The use of Micronair equipment is not recommended as the fine droplets emitted may lead to spray drift.

Use of Surfactant/Wetting Agent

Always add a non-ionic surfactant/wetting agent at the rate of 0.1% (active constituent) of final spray volume. The use of spraying oils is NOT recommended for use in winter cereal crops.

NOTE: DO NOT add a surfactant/wetting agent when tank mixing with terbutryn or diuron.

Compatibility

Macspreed Metmac 600 Herbicide is compatible with most commonly used broadleaf herbicides including:

2,4-D Amine, Bromoxynil/MCPA, Clopyralid (500 g/L), Diflufenican/MCPA Ester, LVE MCPA, LVE MCPA Amine, MCPA/Picloram K Salts, Terbutryn, Terbutryn/MCPA K Salt, Broadstrike, Dicamba, Diuron Flowable, Eclipse, Fluroxypyr, Glyphosate, Jaguar¹, Lontrel¹, Metribuzin..

The product is also compatible with commonly used insecticides such as chlorpyrifos and omethoate. Some temporary crop yellowing may occur with these mixtures. Other mixtures should be tested on a small scale before large areas are treated.

NOTE: The compatibility of Macspreed Metmac 600 Herbicide with grass herbicides varies between products and weed species (refer table below).

	BIOLOGICAL COMPATIBILITY		
	WILD OATS	ANNUAL RYEGRASS	PHALARIS
PUMA ¹	YES		NO
DICLOFOP-METHYL	REFER TO NOTES ON MACSPREED METMAC 600 HERBICIDE/DICLOFOP-METHYL BASED PRODUCTS OR MACSPREED METMAC 600 HERBICIDE/TRISTAR MIXTURES		-
TRISTAR ¹			NO

Notes on Macspreed Metmac 600 Herbicide/Diclofop-Methyl or Macspreed Metmac 600 Herbicide/Tristar Mixtures:

- Some reduction in grass weed control can be expected
- In heavily weed infested areas control may be inadequate (Victoria and Tasmania only)
- Significant reduction in grass weed control should be expected (SA only)
- Mixtures of Macspreed Metmac 600 Herbicide and Diclofop methyl/Tristar¹ are not recommended in WA as these mixtures will result in significant reduction in grass weed control and/or crop damage.

Crop Rotation Recommendations

Many crop species are sensitive to metsulfuron methyl. The minimum recropping intervals are given in the table below. Do not rotate crops other than those listed below to land previously treated with metsulfuron methyl. It is advisable to determine crop tolerance on a small scale before sowing larger areas.

MINIMUM RECROPPING INTERVAL				
Soil pH*	10 days	6 weeks	9 months	14 months
5.6-8.5	Wheat	Barley Cereal Rye Triticale	Canola Chickpeas Faba Beans Linseed Lucerne Lupins Medics**	Japanese Millet Maize Panorama White Millet French Millet Sorghum Soybeans

MINIMUM RECROPPING INTERVAL				
Soil pH*	10 days	6 weeks	9 months	14 months
			Oats Peas Safflower Subterranean Clover**	Sunflower
8.6 and above	Tolerance of crops (grown to maturity) should be determined on a small scale, in the previous season, before sowing into larger areas.			

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

**Including natural regeneration of medics and sub clover.

GENERAL INSTRUCTIONS FOR ALL USES

Resistant Weeds Warning

GROUP	B	HERBICIDE
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MACSPRED METMAC 600 Herbicide is a member of the sulfonyl urea group of herbicides. MACSPRED METMAC 600 Herbicide has the ALS inhibitor mode of action. For weed resistance management MACSPRED METMAC 600 Herbicide is a Group B Herbicide.

Some naturally occurring weed biotypes resistant to MACSPRED METMAC 600 Herbicide and other Group B 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 MACSPRED METMAC 600 Herbicide or other Group B herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Macspred Pty Ltd accepts no liability for any losses that may result from the failure of MACSPRED METMAC 600 Herbicide to control resistant weeds. Strategies to minimize the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or local Macspred representative.

Sprayer Cleanup

Many plant species are sensitive to low concentrations of MACSPRED METMAC 600 Herbicide. For this reason it is important to thoroughly clean spray tanks after use as small quantities of product remaining in the tank may cause injury to desirable pastures and crops if the tank is used for other spraying procedures. The following method of tank cleanup should be used:

1. Drain tank and flush tank, boom, and hoses for at least 10 minutes.
2. Fill the tank with clean water and add 300 mL of household bleach (containing 4% chlorine) per 100 L water. Flush through the hoses and boom, allow to stand for 15 minutes with agitation system engaged, then drain.
3. Repeat Step 2.
4. Nozzles and screens should be removed and cleaned separately.
5. Remove traces of chlorine bleach by rinsing the tank thoroughly with clean water and flushing hoses and boom.

WARNING: DO NOT use chlorine bleach with ammonia. It is important that liquid fertilisers containing ammonia be rinsed from the application equipment before adding a chlorine bleach solution. If traces of ammonia are present it may react with the chlorine bleach releasing a gas with a musty chlorine odour which may cause eye, nose, throat and lung irritation. **DO NOT** clean equipment in an enclosed area.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

DO NOT apply to weeds growing in or over water.

DO NOT spray across open bodies of water.

PROTECTION OF LIVESTOCK

There is a nil withholding period for this product in pasture situations and stock may continue to graze where the product has been used in pasture situations. It is recommended that stock is removed from the pasture for about 3 days to ensure product efficacy. Certain plants such as bracken are naturally toxic to stock. When toxic plants are present, it is recommended that grazing be delayed until complete browning of treated plants has occurred.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

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 drift onto nearby susceptible plants/crops, cropping lands or pastures.

STORAGE AND DISPOSAL

Keep out of reach of children.

Store in the closed original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and 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 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing spray wear elbow-length PVC gloves and goggles. If applying by hand wears 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 in eyes, washes it out immediately with water. Wash hands after use. After each day's use, wash gloves goggles and contaminated clothing.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

For further information, refer to the Material Safety Data Sheet (MSDS), which is available from the supplier.

NOTICE TO BUYER

To the extent permitted by law, all conditions and warranties and statutory or other rights or action which buyer or any other user may have against Macspred or Seller is hereby excluded. Macspred hereby gives Notice to Buyer and other users that it will not accept responsibility for any indirect or consequential loss arising from reliance on product information or advice provided by Macspred or on its behalf unless it is established that such information or advice was provided negligently and that the product has been used strictly as directed.

Macspred's liability shall, in all circumstances, be limited to replacement of the product or a refund of the purchase price paid therefor.

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