

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

eChem

METSULFURON-METHYL WG

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 as per the directions for use table.

READ THIS BOOKLET BEFORE USING THIS PRODUCT

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DIRECTIONS FOR USE - BRUSH APPLICATIONS:

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
		HANDGUN (g/100L)	GROUND BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures**, Rights of Way, Commercial and Industrial Areas	Alligator Weed (<i>Alternanthera philoxeroides</i>)	10	80		FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc 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>E. 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 (200mL/ 100L)		1 + an organosilicone penetrant (10mL/ 5L)	Apply to plants up to 4m 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 + organosilicone penetrant (10mL/ 5L)	Handgun - apply to ensure thorough coverage but not to cause run-off.

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS
		HANDGUN (g/100L)	GROUND BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures**, Rights of Way, Commercial and Industrial Areas	Bellyache Bush (<i>Jatropha gossypifolia</i>)	10 + an organosilicone penetrant (200mL /100L)			FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc
	Blackberry (<i>Rubus spp.</i>)	10 + Mineral Crop Oil (1L/100L)		1 + an organosilicone penetrant (10mL/ 5L)	
	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 2 seasons are required. To minimise damage to native vegetation, water volumes of 500- 800L/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.

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS
		HANDGUN (g/100L)	GROUND BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures**, Rights of Way, Commercial and Industrial Areas	Crofton Weed (<i>Eupatorium adenophorum</i>)	15			FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc 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 organosili cone penetrant (200mL/100L)		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.
	Harrisia Cactus (<i>Eriocereus spp.</i>)	20			Spray to thoroughly wet using water volumes of 1,000 - 1,500 litres per hectare. A follow-up treatment may be necessary.

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS
		HANDGUN (g/100L)	GROUND BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures**, Rights of Way, Commercial and Industrial Areas	Hawthorn (<i>Crataegus spp.</i>)	10			FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc
	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 2.5m 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		Handgun - 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.
	5				

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS
		HANDGUN (g/100L)	GROUND BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures**, Rights of Way, Commercial and Industrial Areas	Paterson's Curse/ Salvation Jane (<i>Echium plantagineum</i>)	5	15		FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc Handgun - 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/ 5L)	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.
	Smartweed (<i>Polygonum spp.</i>)	10	10	-	

SITUATION	WEEDS CONTROLLED	RATE*			CRITICAL COMMENTS
		HANDGUN (g/100L)	GROUND BOOM (g/ha)	GAS GUN (g/L)	
Native Pastures**, Rights of Way, Commercial and Industrial Areas	Sweet Briar (<i>Rosa rubiginosa</i>)	10		1 + an organosilicone penetrant (10 mL/ 5L)	FOR ALL WEEDS: Apply when target weed is in active growth and not under stress from waterlogging, drought etc Do not apply 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 - Gasgun: Do not apply to bushes more than 2 m tall. Apply with shots of 25mL of dilute product.
	Wait-A-While (<i>Cesalpinia decapelata</i>)	10			
	Wild Turnip (<i>Brassica tournefortii</i>)	5			

WITHHOLDING PERIOD - NOT REQUIRED WHEN USED AS DIRECTED

* ALWAYS ADD A SURFACTANT/ WETTING AGENT

** LEGUMES IN THE PASTURE WILL BE DAMAGED

AERIAL APPLICATION BY HELICOPTER

Restrains: DO NOT apply 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
				FOR ALL WEEDS: Apply when weeds are actively growing and not stressed by conditions such as waterlogging, moisture etc
Pastures**, Rights of Way, Commercial and Industrial Areas	Blackberry (<i>Rubus spp.</i>)	NSW, Tas, Vic only	160 g/ha	Ensure all foliage is thoroughly covered including peripheral runners. Use at least 100L 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 g/ha	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 210 kPa to give large droplet size. Add a non-ionic surfactant.

** LEGUMES IN THE PASTURE WILL BE DAMAGED

* ALWAYS ADD A SURFACTANT / WETTING AGENT

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

eCHEM METSULFURON HERBICIDE + GLPHOSATE 360 TANK MIX (always refer to First Aid, Safety Direction, Resistant Weeds Warning and any other restrictions for Glyphosate 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.

Results may be slow to appear and may not be visible for 3-6 weeks. Full brown-out may take 3-6 months.

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.
		GROUND BOOM OR HELICOPTER	HANDGUN OR KNAPSACK	
Native Pastures **, Rights of Way, Commercial and Industrial Areas, Domestic and Public Service Areas	Blackberry (<i>Rubus spp</i>)	60g + 8 L Glyphosate 360	3g + 400mL Glyphosate 360 per 100L water	Apply from flowering and before leaf yellowing. Do not apply to bushes bearing mature fruit.
	Bracken (<i>Pteridium esculentum</i>)	30g + 4 L Glyphosate 360		Apply when fronds are fully expanded but before first frosts. Refer to boom spraying section if applying by boom spray.
	Gorse (<i>Ulex europaeus</i>)			Do not apply in spring. Apply to actively growing plants.
	Lantana (<i>Lantana camara</i>)			Apply to actively growing plants which are not drought stressed.
	St Johns Wort (<i>Hypericum perforatum</i>)			Apply in Spring to Summer to actively growing plants.
	Sweet Briar (<i>Rosa rubiginosa</i>)			Apply when plants are in full leaf. Do not apply once leaf fall has commenced.

** LEGUMES IN THE PASTURE WILL BE DAMAGED

WITHHOLDING PERIOD - NOT REQUIRED WHEN USED AS DIRECTED

eCHEM METSULFURON HERBICIDE + GLYPHOSATE 360 TANK MIX (CONTINUED) (always refer to First Aid, Safety Direction, Resistant Weeds Warning and any other restrictions for Glyphosate 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.

Results may be slow to appear and may not be visible for 3-6 weeks. Full brown-out may take 3-6 months.

SITUATION	WEEDS CONTROLLED	HANDGUN OR KNAPSACK RATE per 100 LITRES Always add a non-ionic surfactant unless otherwise specified	CRITICAL COMMENTS
Native Pastures **, Rights of Way, Commercial and Industrial Areas, Domestic and Public Service Areas	Apple box (<i>Angophora floribunda</i>)	10g + 200mL Glyphosate 360 + organosilicone penetrant (200mL/100L)	Spray plants up to 4m high ensuring thorough coverage. Plants growing from large lignotubers may not be controlled
	Australian blackthorn (<i>Bursaria spinosa</i>)	10g + 200mL Glyphosate 360	Spray to point of run off.
	Bitou Bush/ Boneseed (<i>Chysanthemoides monilifera</i>)		Ensure thorough coverage. Minimise contact with desirable species.
	Blackberry (<i>Rubus spp.</i>)		Ensure thorough coverage. Peripheral runners must also be covered to minimise regrowth. Apply between January and April. TAS ONLY: Apply after petal fall. Do not apply to bushes bearing mature fruit.

SITUATION	WEEDS CONTROLLED	HANDGUN OR KNAPSACK RATE per 100 LITRES Always add a non-ionic surfactant unless otherwise specified	CRITICAL COMMENTS
Native Pastures **, Rights of Way, Commercial and Industrial Areas, Domestic and Public Service Areas	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>)	10g + 200mL Glyphosate 360 + organosilicone penetrant (200mL/100L)	Spray plants up to 4 m high. Trees growing form large lignotubers may not be controlled.
	Gorse (<i>Ulex europaeus</i>)		Ensure thorough coverage and penetration of spray into the bush. Apply to plants up to 2m tall.
	Hawthorn (<i>Crataegus leavigata</i>)	10g + 200mL Glyphosate 360	Spray to point of run off.
	Lantana (<i>Lantana camara</i>)		Ensure thorough coverage and penetration of spray into the bush. Apply to plants up to 2m tall.
	Privet (<i>Ligustrum spp.</i>)		Apply to bushes up to 3m high. Ensure thorough coverage. If plants are not adequately covered plants may not be controlled.
	St Johns Wort (<i>Hypericum perforatum</i>)		Always add a non-ionic surfactant at the rate of 100mL/ 100L. Spray to wet all foliage, but not to cause run-off.
	Sweet Briar (<i>Rosa rubiginosa</i>)		Do not apply after leaf fall has commenced or after the end of February. Spray foliage to point of run-off.

SITUATION	WEEDS CONTROLLED	HANDGUN OR KNAPSACK RATE per 100 LITRES Always add a non-ionic surfactant unless otherwise specified	CRITICAL COMMENTS
Native Pastures **, Rights of Way, Commercial and Industrial Areas, Domestic and Public Service Areas	Tree of Heaven (<i>Ailanthus altissima</i>)	10g + 200mL Glyphosate 360	

** LEGUMES IN THE PASTURE WILL BE DAMAGED
WITHHOLDING PERIOD - NOT REQUIRED WHEN USED AS DIRECTED

**ESTABLISHED PASTURES AND PASTURE RENOVATION
DIRECTIONS FOR USE:**

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 use on crops grown for pasture seed.
- DO NOT apply to weeds under stress or that are not actively growing.

CROPS	WEEDS CONTROLLED	RATE (g/ha)	CRITICAL COMMENTS
ESTABLISHED PASTURES TOLERANT GRASS SPECIES - Perennial phalaris and Perennial Cocksfoot (Stands must be older than 1 year) OR PASTURE RENOVATION Use to reduce weeds in established pastures before sowing a new pasture the following season	Annual Clover (<i>Trifolium sp.</i>)	5g	Apply before flowering
	Annual Medics (<i>Medicago sp.</i>)	5g	For best results apply before flowering
	Cape Tulip (<i>Homeria sp.</i>) One and Two leaf	5g	Apply at bulb exhaustion usually during July/ early August. Repeat application may be required to obtain control.
	Docks (<i>Rumex spp.</i>)	5g - seedlings 10g - established	For best results apply in spring prior to bolting.
	Doublegee (<i>Emex australis</i>)	5 or 10g	Use the higher rate on dense infestations. Apply up to the 6 leaf stage.
	Erodium/ Storksbill/ Wild Geranium (<i>Erodium spp.</i>)		Use the higher rate on dense infestations. Apply before flowering.
	Onion Grass/ Guildford Grass (<i>Romula rosea</i>)	15g	Apply at bulb exhaustion usually late June/ July before the onset of browning off caused by Helminthosporium fungus. If mixing with Glyphosate use 10g/ha.

CROPS	WEEDS CONTROLLED	RATE (g/ha)	CRITICAL COMMENTS
ESTABLISHED PASTURES TOLERANT GRASS SPECIES - Perennial phalaris and Perennial Cocksfoot (Stands must be older than 1 year) OR PASTURE RENOVATION Use to reduce weeds in established pastures before sowing a new pasture the following season	Paterson's Curse/ Salvation Jane (<i>Echium plantagineum</i>)	10 or 15 g	Use the lower rate on small plants and the higher rate before bolting/ flowering.
	Ragwort (<i>Senecio jacobaea</i>)	15g	Apply at the rosette to cabbage stage when plants are actively growing.
	Sorrel (<i>Rumex acetosella</i>)	5g - seedlings 10g - established	For best results apply in spring before seed heads appear.
	Soursob (<i>Oxalis pescaprae</i>)	5 or 10g	For best results apply before flowering. Use the higher rate on dense stands.
	Wild Garlic (<i>Allium vineale</i>)	15g	Apply at bulb exhaustion usually during July/ early August. Repeat application may be required to obtain control.

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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED

GENERAL INSTRUCTIONS - BRUSH APPLICATIONS, ESTABLISHED PASTURES AND PASTURE RENOVATION

eChem Metsulfuron-Methyl WG is a selective herbicide which is rapidly absorbed by root and leaves.

- Always add a surfactant/wetting agent.
- Best results are achieved when:
 1. application is made to actively growing plants which are not stressed by any factors such as dry weather conditions, waterlogging etc.
 2. 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 metre tall. This may not be until 2 years after the initial application. Legumes will be removed from pasture if oversprayed with eChem Metsulfuron-Methyl WG Herbicide.
 - Legumes are extremely sensitive to eChem Metsulfuron-Methyl WG Herbicide and will be removed from the pasture if over sprayed.
 - Introduced grass species may be severely damaged if oversprayed.
 - Application to weeds that are not actively growing due to adverse conditions may result in weeds only being stunted or suppressed.
 - Some grasses will be damaged in pasture sprayed with this product and biomass production may be reduced for several months.
 - 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 eChem Metsulfuron-Methyl WG Herbicide.
 - It is recommended that this product not be applied to bushes bearing mature blackberries due to the collection of blackberries for food purposes.
 - 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 eChem Metsulfuron-Methyl WG/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 the following year.
- Ungerminated clover will not be affected but seed set of clover 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

eChem Metsulfuron-Methyl WG 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.

Use of surfactant/ wetting agent

eChem METSULFURON 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 100mL/ 100L of final spray volume.

eChem METSULFURON Herbicide tank mixed with Glyphosate - Use a non-ionic surfactant when mixing with glyphosate herbicide. In some tank mix situations the use of an organosilicone penetrant (eg Pulse[®]) is recommended. This recommendation must be strictly followed in order to achieve adequate weed control.

Gas gun applications - An organosilicone penetrant (eg Pulse[®]) should be added at the rate of 10mL/ 5L or 200mL/100L of final spray volume.

Where a mineral spray oil is recommended use 1L/100L of final spray volume (ie 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

eChem METSULFURON Herbicide may be applied by air, handgun, boom spray or gas gun according to the Directions For Use Table.

Handgun - 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 metre 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 metres high or for bushes with a large diameter. When using 3g eChem Metsulfuron-Methyl WG Herbicide + 400mL of Glyphosate 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 150L prepared spray per hectare. Increase to 200L/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 100L/ha on blackberries and 60L/ha on *Mimosa pigra* up to a maximum of 200L 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 30°C. (except when treating *M. pigra*)

Tank mixes with Glyphosate Herbicide

In certain situations such as the presence of harder to kill species or in follow-up treatment situations a tank mix with Glyphosate 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 MCPA Amine, MCPA Ester, 2,4-D Amine, dicamba, Lontrel¹, Starane, and commonly used insecticides such as chlorpyrifos and omethoate. Always refer to the companion product label for instructions/ restrictions.

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.

Legumes will be removed from pasture if they are over sprayed with the product.

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.

The area sprayed with eChem Metsulfuron-Methyl WG Herbicide may be replanted to the specified pasture species after the interval in the following table:

Soil pH*	Pasture Species	Rate g/ha	Minimum Rainfall	Minimum Recrop Interval
5.5 and below	Sub Clover ² and Haifa White Clover	5	150mm	12 weeks
		10		20 weeks
		15		20 weeks
	Cocksfoot and Phalaris	5	150mm	8 weeks
		10		8 weeks
		15		16 weeks
	Perennial Ryegrass and Fescue	5	100mm	16 weeks
		10	100mm	16 weeks
		15	150 mm	20 weeks

Soil pH*	Pasture Species	Rate g/ha	Minimum Rainfall	Minimum Recrop Interval
5.6 - 6.5	Sub Clover ² , Haifa White Clover, Perennial Ryegrass and Fescue	Bioassay ³		
	Cocksfoot, Phalaris	5,10	175mm	12 weeks
		15	Bioassay	
6.6 and above	Cocksfoot and Phalaris	Bioassay ³		

² Sub Clover varieties: Junee, Karridale, Seaton Park, Trikkala

³ Tolerance of species should be determined on a small scale before sowing commercial areas

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

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

- For soils with a pH below 7 (1:5 soil:water method) a minimum of 12 months should elapse before over sowing treated areas with grasses or legumes. It is suggested that a small area be oversown 1-2 months prior to the planned time to check for possible harmful residues.
- For soils with pH greater than 7 DO NOT replant until a company representative has been contacted.

APPLICATION IN WINTER CEREAL CROPS

DIRECTIONS FOR USE:

Restrictions:

- 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.

Post Crop and Weed Emergence by Ground and Aerial Application - eChem Metsulfuron Herbicide Alone

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 spp.</i>	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 in height or diameter
	Colomba Daisy (<i>Pentzia suffruticosa</i>)	SA only	5	

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale, Wheat (cont)	Cape Tulip (<i>Homeria spp.</i>)	WA only	5	
	Charlock (<i>Sinapsis arvensis</i>)	NSW, Vic, Tas, SA only	5	
	Chickpeas (volunteer) (<i>Cicer arietinum</i>)	Qld, NSW, Vic, SA only	5	
	Chickweed (<i>Stellaria media</i>)	NSW, Vic, Tas, SA only	5	
	Chicory (<i>Cichorium intybus</i>)	Qld only	5	
	Clover (subterranean) (<i>Trifolium subterraneum</i>)	All States	5	
	Common Sowthistle (<i>Sonchus oleraceus</i>)	Qld, NSW, Tas, Vic only	5	Apply up to the 4 leaf stage
	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 densiflora</i>)	NSW, SA only	5	
Dock (broadleaf) (<i>Rumex obtusifolius</i>)	WA only	5		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale, Wheat (cont)	Dock (broadleaf) (<i>Rumex obtusifolius</i>)	Qld, NSW, Vic, Tas, SA only	5 or 7	Use the higher rate where weed pressure is high.
	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	5	
		NSW only	7	
	Hare's Ear/ Treacle Mustard (<i>Conringia orientalis</i>)	Vic only	5	Apply before the 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 to 3 leaf.
	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		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale, Wheat (cont)	Mallee Catchfly (<i>Silene apetala</i>)	SA only	5	
	Medics (<i>Medicago spp.</i>)	All States	5	
	New Zealand Spinach (<i>Tetragonia tetragonoides</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	Use the higher rate for large weeds or heavy weed populations.
		NSW, SA only	5 or 7	
	Prickly Lettuce (<i>Lactuca serriola</i>)	Qld, Vic, Tas, SA only	5 or 7	
		WA only	5	
	Red Pigweed (<i>Portulaca oleracea</i>)	Qld only	5	Apply before the 6 leaf stage
			7	Apply this 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		
Salt bush (<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.	

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale, Wheat (cont)	Shepherds Purse (<i>Capsella bursapastoris</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	5	
	Smallflower fumitory (<i>Fumaria parviflora</i>)	SA only	5	
	Sorrel (<i>Rumex acetosella</i>)	NSW, Vic, Tas, SA, WA only	5	Some regeneration from underground rootsocks and new germinations may occur late in the season.
	Soursob (<i>Oxalia pes-caprae</i>)	NSW, Vic, Tas, SA, WA only	5	Apply after majority of soursobs have emerged and are actively growing.
	Spiny Emex/ Doublegee Three Cornered Jacks (<i>Emex australis</i>)	WA only	5	
		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	5		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CRITICAL COMMENTS
Barley, Cereal Rye, Triticale, Wheat (cont)	Turnipweed (<i>Rapistrum rugosum</i>)	All States	5	
	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	7	Apply at the 1-2 leaf stage.
Wild Turnip (<i>Brassica tournefortii</i>)	All States	5		

WITHHOLDING PERIOD - NOT REQUIRED WHEN USED AS DIRECTED

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

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, Barley, Triticale, Cereal Rye	Capeweed (<i>Arctotheca calendula</i>) Wild Radish (<i>Raphanis raphanistrum</i>)	NSW, Vic only	5g + 500mL Diuron Flowable (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 Shortim, Kamillaroi, or Olympic wheat. Apply when weeds are 2-5 leaf.
		SA only	5g + 500mL Diuron Flowable (500g/L) + 350mL MCPA Amine (500g/L)	3 to 5 leaf (Zadoks 13-15)	
		WA only	5g + 350mL Diuron Flowable (500g/L) + 400mL MCPA Amine (500g/L)	3 to 4 leaf (Zadocks 13-14)	
Barley, Wheat	Capeweed (<i>Arctotheca calendula</i>)		5g + 550mL Terbutryn + 600mL MCPA Amine (500g/L)	3 leaf to early tillering (Zadocks 13-21)	Apply when weeds are 2-6 leaf.
		SA only	5g + 550mL Terbutryn		
		NSW only	5g + 850mL Terbutryn		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS	
Barley, Cereal Rye, Triticale & Wheat (cont)	Capeweed (<i>Arctotheca calendula</i>)	NSW, Vic, SA, WA only	5g + 1L Agrityne ¹	3 leaf to early tillering (Zadock 13-21)	Apply when weeds are 2 to 6 leaf	
		WA only	5g + 750mL Brominil M	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	5g + 1.4L Brominil M			
		WA only	5g + 1.4L Brominil M	3 leaf to full tillering (SA, WA only) 5 leaf to full tillering (Qld, NSW, Vic, Tas only)	Apply when weeds are 6 to 8 leaf stage.	
		Qld, NSW, Vic, Tas SA only	5g + 2.1L Brominil M			
	Wild Radish (<i>Rhaphanus raphanistrum</i>)	Qld only	5g + 700mL - 1L MCPA Amine (500 g/L)	Early tillering to before boot (Zadocks 21-39)	Apply the lower rate to seedling weeds (3 - 6 leaf) and the higher rate to well developed weeds up to rosette stage.	
		NSW only		Apply 700mL after the crop has reached the 5 leaf stage. Apply the higher rate 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 (Zadocks 21-39)		Apply when weeds are seedling to rosette.
		WA only	5g + 1.2L MCPA Amine (500g/L)	5 leaf to tillering (Zadocks 15-30)		

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, barley	Wild Radish (<i>Rhaphanus raphanistrum</i>)	WA only	5g + 250mL Tigrex ¹	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 and Triticale		NSW, Vic, Tas, SA, WA only	5g + 1.1 to 1.6 LVE MCPA	5 leaf to commencement of flag leaf (Zadocks 15-37)	Apply up to 2-3 leaf stage only.
	Saffron thistle (<i>Carthamus lanatus</i>)	NSW, Vic, Tas, SA, WA only	5g + 1.1L to 1.6L LVE MCPA	5 leaf through to commencement of flag leaf (Zadoks 15-37)	Spray young rosettes before leaves become spiny.
		Qld only	5g + 1.4L to 2.1L MCPA Amine	Early tillering to before boot (Zadoks 21-39) Rates above 1.5L/ha of MCPA Amine only to be used on crops from midtillering to boot stage (Zadocks 23-29)	Apply to weeds at seedling to rosette stage. Use the higher rate on more advanced weeds and the lower rate on seedling weeds.
		NSW, Vic, Tas, SA, WA only	5g + 300mL Lontrel ¹	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.
	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.

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, Barley, Cereal Rye and Triticale (cont)	Variegated Thistle (<i>Silybum marianum</i>)	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 the seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.
	Variegated Thistle (<i>Silybum marianum</i>)	Qld only	5g + 1.1L 2,4-D Amine (500 g/L)	Mid tillering to before boot (Zadocks 23-39)	Apply to weeds at the seedling to rosette stage.
			5g + 1.5L MCPA Amine	Early tillering to before boot (Zadoks 21-39)	
Wheat	Slender thistle (<i>Carduus tenuiflorus</i>)	NSW, Vic, Tas, SA, WA only	5g + 840mL LVE MCPA Amine	Apply from 5 leaf through to commencement of flag leaf (Zadoks 15-37)	Spray at pre-cabbage stage.
			5g + 2.1L LVE MCPA		Moderately susceptible. Spray young rosettes.
Wheat, Barley, Cereal Rye, Triticale		NSW only	5g + 1L to 1.7L 2,4-D Amine (500g/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*	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.

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, Barley, & Triticale	Black bindweed/ Climbing Buckwheat (<i>Polygonum convolvulus</i>)	Qld, NSW only	5 or 7g + 1L Tordon ¹ 242	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.

eChem Metsulfuron Herbicide alone, eChem Metsulfuron Herbicide + Glyphosate 360 - NOT REQUIRED WHEN USED AS DIRECTED

Mixtures with MCPA, Tordon 242, Terbutryn, 2,4-D- 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 Brominil M - DO NOT CUT OR GRAZE FOR STOCK FOOD FOR 14 DAYS AFTER TANK MIX APPLICATION

**eCHEM METSULFURON HERBICIDE AND MIXTURE WITH GLYPHOSATE
FALLOW/ PRE-PLANT KNOCKDOWN**

CROP	WEEDS CONTROLLED	STATES	RATE (g/ha)	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat	Refer to Post Crop and Weed Emergence Section of this label and Glyphosate 450 Herbicide Directions for Use	All States except WA	5 or 7 g + Glyphosate at labelled rates	Refer to Post Crop and Weed Emergence Section of this label and Glyphosate Directions for Use	DO NOT apply at 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 for the target weed.
		WA only	5 g + Glyphosate at labelled rates		
All States except WA		5 or 7 g + Glyphosate at labelled rates			
WA only		5 g + Glyphosate at labelled rates			
Barley, Cereal Rye or Triticale	Refer to Post Crop and Weed Emergence Section of this label and Glyphosate 450 Herbicide Directions for Use	All States except WA	5 or 7 g + Glyphosate at labelled rates	Refer to Post Crop and Weed Emergence Section of this label and Glyphosate Directions for Use	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 for the target weed.
		WA only	5 g + Glyphosate at labelled rates		
All States except WA		5 or 7 g + Glyphosate at labelled rates			
WA only		5 g + Glyphosate at labelled rates			

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

WITHHOLDING PERIOD:

eChem Metsulfuron Herbicide, eChem Metsulfuron Herbicide + Glyphosate - NOT REQUIRED WHEN USED AS DIRECTED

GENERAL INSTRUCTIONS - CEREAL CROPS

eChem Metsulfuron-Methyl WG 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 ie preplant. Best results are obtained if weeds are small (no larger than 5cm 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 7.5cm 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 eg Chlorsulfuron, consult your local representative or Department of Agriculture before application of eChem Metsulfuron-Methyl WG 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 thorough 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 50L prepared spray/ha.

Aerial Application

Apply in a minimum of 20L/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 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 spaying oils is NOT recommended.

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

Compatibility

eChem Metsulfuron Methyl Herbicide is compatible with most commonly used broadleaf herbicides including: MCPA Amine, Diuron Flowable, 2,4-D Amine, Agtryne, Broadstrike, Brominil M, Eclipse, Terbutryn, MCPA Ester, MCPA Amine, LVE MCPA, Jaguar¹, Tigrex¹, Tordon¹ 242, Tordon¹ 75D, Metribuzin, Lontrel¹, Dicamba, Starane¹, glyphosate.

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 eChem Metsulfuron-Methyl WG Herbicide with grass herbicides varies between products and weed species (refer table below). DO NOT mix with Grasp¹, Mataven¹ 100.

	BIOLOGICAL COMPATIBILITY		
	Wild oats	Annual ryegrass	Phalaris
PUMA ¹	Yes		No
DICLOFOP METHYL	Refer to notes on eChem Metsulfuron-Methyl/ Diclofop Methyl based products OR eChem Metsulfuron-Methyl/ Tristar mixtures		-
TRISTAR ¹			No
GRASP	No		No
MATAVEN 100	No		-

Notes on eChem Metsulfuron-Methyl WG/Diclofop methyl or eChem Metsulfuron-Methyl WG/ Tristar mixtures:

- a) some reduction in grass weed control can be expected
- b) In heavily weed infested areas control may be inadequate (Victoria and Tasmania only)
- c) significant reduction in grass weed control should be expected (SA only)
- d) Mixtures of eChem Metsulfuron-Methyl WG 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.

Spray Preparation

The product is a dry flowable granule which must be mixed with clean water.

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 eChem Metsulfuron-Methyl WG 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.

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** Oats Peas Safflower Subterranean Clover**	Japanese Millet Maize Panorama White Millet French Millet Sorghum Soybeans 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 subclover.

GENERAL INSTRUCTIONS RELATING TO ALL USES FOR eCHEM METSULFURON-METHYL WG HERBICIDE

RESISTANT WEEDS WARNING

GROUP B HERBICIDE

eChem Metsulfuron-Methyl WG Herbicide is a member of the sulfonyl urea group of herbicides. eChem Metsulfuron-Methyl WG Herbicide has the ALS inhibitor mode of action. For weed resistance management eChem Metsulfuron-Methyl WG Herbicide is a Group B Herbicide.

Some naturally occurring weed biotypes resistant to eChem Metsulfuron-Methyl WG Herbicide and other ALS inhibitor 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 eChem Metsulfuron-Methyl WG Herbicide or any other ALS inhibitor herbicide.

Since the occurrence of resistant weeds is difficult to detect prior to use, eChem (Australia) Pty Ltd accepts no liability for any losses that may result from the failure of eChem Metsulfuron-Methyl WG Herbicide to control resistant weeds.

Sprayer Cleanup

Many plant species are sensitive to low concentrations of eChem Metsulfuron-Methyl WG 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 300mL of household bleach (containing 4% chlorine) per 100L 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 and stock may continue to graze where the product has been used in pasture situations. It is recommended that stock are 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.

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 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SAFETY DIRECTIONS

May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust or spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

FIRST AID

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

Material Safety Data Sheet

Additional information is listed in the Material Safety Data Sheet which is available from the supplier.

CONDITIONS OF SALE: *eChem (Australia) Pty. Ltd.* accepts responsibility for the consistent quality of the product however since the use and application of the product is beyond control, the company accepts no responsibility whatsoever for any loss, damage or other result following the use of the product whether used in accordance with directions or not; other than those mandatorily imposed by statutes, the liability is limited to the replacement of the goods and is conditional upon a claim made in writing and, where necessary, a sufficient part of the goods being returned for proper examination by the company within thirty days of sale.

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