# DANGEROUS POISON

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
CAN KILL IF SWALLOWED
DO NOT PUT IN DRINK BOTTLES
KEEPLOCKED UP

# Shirquat® 250<sub>Herbicide</sub>

ACTIVE CONSTITUENT: 250 g/L PARAQUAT present as PARAQUAT DICHLORIDE

**GROUP** 



**HERBICIDE** 

For the control of a wide range of grasses and broadleaf weeds as per directions for use. IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USING THIS PRODUCT

Crop Care Australia Pty Ltd ACN 061 362 347 Unit 15/16 Metroplex Avenue Murarrie QLD 4172 Tel: (07) 3909 2000



APVMA Approval No.: 53919/54631

Contents: 5L Contents: 20L Contents: 110L Contents: 200L Contents: 1000L

FOR USE ONLY AS AN AGRICULTURAL AND HORTICULTURAL HERBICIDE. THIS PRODUCT IS TOO HAZARDOUS TO BE USED IN THE HOME GARDEN.

Version: 29 Nov 2011

# STORAGE AND DISPOSAL (5, 20 and 200L only)

Store in the closed, original container in a dry, cool, well-ventilated locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. 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 not available bury the containers below 500mm in a disposal pit specifically set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State and Territory government regulations. Empty containers and product should NOT be burnt.

# STORAGE AND DISPOSAL (110L and 1000L only)

Store in the closed, original container in a dry, cool, well-ventilated locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of storage for refill or storage.

# **SAFETY DIRECTIONS**

Very dangerous, particularly the concentrate. Product is poisonous if swallowed. Will irritate the nose, throat and skin. Attacks the eyes, protect the eyes while using. Avoid contact with eyes, skin and clothing. When opening the container and preparing product for use wear elbow-length PVC gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. If clothing becomes contaminated with product remove clothing immediately. If product in eyes, wash it out immediately with water. Avoid contact with spray mist. DO NOT inhale spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and face shield or goggles and contaminated clothing.

# **SPRAY APPLICATION**

- DO NOT work in spray mist.
- DO NOT continue to use if skin irritation or nose bleed occurs. This may be caused by exposure to spray mist as the result of
  incorrect use of equipment or adverse climatic conditions. Stop and review handling and spraying techniques before further spraying.
   If symptoms persist seek medical advice.
- When there is a risk of exposure to spray mist wear waterproof footwear and waterproof protective clothing, impervious gauntlet length gloves (rubber or PVC), goggles and a face mask and respirator covering nose and mouth and capable of filtering spray

droplets. A high efficiency type particulate respirator is recommended, but in any event use a respirator which complies with the requirements of AS1716 (Standards Association of Australia). Further advice on safety equipment should be obtained from a safety equipment manufacturer.

 Avoid contacting vegetation wet with spray, but if necessary to do so wear waterproof footwear and waterproof protective clothing and gloves.

# **FIRST AID**

If poisoning occurs get to a doctor or hospital quickly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

#### **NOTE TO PHYSICIANS**

For additional advice on the treatment of paraquat poisoning please consult the booklet "The Treatment of Paraquat Poisoning: A Guide for Doctors".

#### MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet which can be obtained from your supplier or from the Crop Care website – <a href="https://www.cropcare.com.au">www.cropcare.com.au</a>

# In case of emergency: Phone 1800 033 498

Ask for shift supervisor. Toll free 24 hours.

# Conditions of sale

Crop Care Australasia Pty Ltd will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply of these goods other than responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of these goods. To the extent allowed by such Statutes the liability of Crop Care Australasia Pty Ltd is limited to the replacement of the goods or (at the option of Crop Care Australasia Pty Ltd) the refund of the price paid and where possible sufficient part of the goods to enable proper examination being returned to Crop Care Australasia Pty Ltd within thirty days of delivery.

® Shirquat is a registered trademark of Nufarm Technologies USA Pty Ltd.



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# BN/DOM/Barcode

DrumMuster 5L, 20L, 200L

BIPYRIDILIUM PESTICIDE LIQUID, TOXIC, (contains paraquat)	
UN No. 3016	
PG III	TOXIC
HAZCHEM 2X	6
IN A TRANSPORT	SPECIALIST ADVICE IN
EMERGENCY DIAL	AN EMERGENCY ONLY
000	1800 033 498
POLICE OR FIRE BRIGADE	ALL HOURS – AUSTRALIA WIDE

# **DANGEROUS POISON**

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# Shirquat® 250 Herbicide

ACTIVE CONSTITUENT: 250 g/L PARAQUAT present as PARAQUAT DICHLORIDE

GROUP HERBICIDE

For the control of a wide range of grasses and broadleaf weeds as per directions for use. **READ THIS LEAFLETBEFORE USING THIS PRODUCT** 

Crop Care Australia Pty Ltd ACN 061 362 347 Unit 15/16 Metroplex Avenue Murarrie QLD 4172 Tel: (07) 3909 2000

APVMA Approval No.: 53919/54631

# **DIRECTIONS FOR USE:**

#### **RESTRAINTS:**

DO NOT add wetter unless spraying at high volume. Where Shirquat® 250 is mixed with water at less than 400mL/100L of water, add 100mL Agral or 60mL BS1000 per 100L of spray.

DO NOT spray plants which are water logged, under stress of any kind or covered with soil or dust.

DO NOT spray plants covered with heavy dew, but rain following spraying will not affect results.

DO NOT sow or cultivate for 1 hour after spraying but operations should commence within 7 days.

For ground application only - DO NOT use through aircraft, misting machines or hand-held ultra low volume controlled droplet applicators (CDA units).

Crop use or Situation	Weeds controlled	State	Rate	Critical Comments
Aid to Cultivation to minimise cultivation and prepare a clean bed for sowing	Annual grass and broadleaf weed control.  Early Autumn sowing.	All States	1.2-1.6L/ha ¹	Where cultivation follows spraying, it may commence one hour after spraying but should be completed within 7 days. Where heavy weed growth is present at spraying a better seed bed will result if cultivation is delayed 3-5 days. Use the higher rates for dense,
	Winter, Spring and early Summer sowing.		1.6-2.4L/ha	more mature weed stands. Wild oats must have at least two leaves. Where Regione* is used the lower
	Volunteer canola including Roundup Ready® varieties (up to 4 leaf) (up to 6 leaf)		1.8L/ha 2.4L/ha	Shirquat 250 rate should be sufficient to control dense mature weeds. Pasture: Remains of old pasture should be reduced by continuous heavy grazing. Remove stock 3-5 days before spraying to allow
	Wild oats at 2-5 leaf stage in autumn/winter.	QLD, VIC, SA, TAS, NT, WA only	600-800mL/ha	weeds to freshen up.
		NSW, ACT only	600mL/ha	
Rice	Annual grass and broadleaf weed control.	QLD, NSW, NT only	1.6L/ha 800mL/ha	Pre-sowing. Post-sowing, pre-crop emergence.
Wild Oat control in Spring Fallows	Wild oats at 2-5 leaf stage.	QLD, NSW, NT, ACT only	1.2-2 L/ha	Use higher rate for Summer growth. Avoid spraying under hot, dry conditions. Best results will be obtained when spraying is carried out in the late evening.
Kikuyu/Paspalum Pasture	To suppress growth to oversow winter seed.	QLD, NSW, ACT only	1.6 or 2.4L/ha	Use the high rate for February spraying and the low rate in March.
Selective Weed Control Autumn / early Winter - annual clovers - perennial clover	Annual grass and some broadleaf weed control except Paterson's curse, Sorrel, Dock, Shepherd's purse and some thistles	All States	600mL-1.2L/ha 1.2-1.6L/ha <sup>1</sup>	Use the higher rates for dense weed stands.

Crop use or Situation	Weeds controlled	State	Rate	Critical Comments
Late Winter / earlySpring - annual clovers - perennial clovers - cocksfoot - perennial ryegrass - phalaris - Demeter fescue only	For control of these weeds alternative methods such as the spray-graze technique with 2,4-D or MCPA should be considered.	QLD, NSW, VIC, SA, TAS, NT, ACT only	1.6-2.4L/ha <sup>1</sup>	Use the higher rate in Winter/early Spring when barley grass is present.  All applications: Graze pastures continuously after the seasonal break to a height of 2-4cm. Remove stock 2-3 days before spraying to allow weeds to freshen up. DO NOT apply until clover has reached the 6 leaf stage. Mixed pastures will be scorched initially but should show good recovery and beneficial changes in composition following Spring rainfall and growth.  DO NOT spray clovers which are affected by insect attack, disease or moisture stress and DO NOT use on clover pastures growing in water repellent sands or other situations subject to moisture stress at or immediately following treatment otherwise poor recovery of the clover may result.  Use the lower rate for cocksfoot and perennial ryegrass and the higher rate for Phalaris and Demeter fescue. The perennial grasses must be at least 12 months old at spraying.  DO NOT APPLY TO MEDICS
Late Winter / early Spring - annual clovers - perennial clovers - cocksfoot - perennial ryegrass - phalaris - Demeter fescue only	Yorkshire fog grass	VIC, SA, TÁS, NT, ACT only		Apply in early spring to reduce Yorkshire fog grass component and increase the clover and desirable grass component. Mixed pastures will be scorched initially but should show good recovery and beneficial changes in composition following Spring rainfall and growth. In lower rainfall areas application in mid to late Winter may be almost as effective but allow better pasture recovery. If pasture has been grazed allow sufficient time for pasture and fog grass recovery before spraying. Apply in spray volumes of 100-250L/ha, the latter for dense or tall, ungrazed pastures. Add Agral at 200mL/100L or BS1000 at 120mL/100L.
Lucerne Autumn / early Winter	Annual grass and some broadleaf weeds.	QLD, VIC, SA, WA, TAS, NT only NSW only	1.2-1.6L/ha <sup>1</sup> 1.2L/ha	Use the higher rates for dense weed stands. DO NOT spray Lucerne stands under 12 months old. For residual weed control or if Paterson's curse,
Late Winter / early Spring	Annual grass and some broadleaf weeds.	QLD, VIC, SA, WA, TAS, NT only NSW, ACT only	1.6-2.4L/ha <sup>1</sup>	Shepherd's purse and some other broadleaf weeds are present add Diurex WG Herbicide at 1.1kg or 1.9kg. If mintweed is present use Atradex® WG Herbicide at 600g/ha.  WARNING - In certain areas, an uncommon species of barley grass ( <i>H. glaucum</i> - common barley grass is <i>H. leporinum</i> ) resistant to paraquat based products has become established. It may regrow after an initial scorch by Shirquat 250. Where this problem is suspected use Fusilade for grass weed control. If Shirquat 250 has been applied use Fusilade at 1L/ha after regrowth but before heading.
Perennial Grass Seed Crops Cocksfoot, Perennial ryegrass, Phalaris and Demeter fescue only	Annual grass and some broadleaf weeds.	All States	600mL- 1.2L/ha <sup>1</sup>	Use the low rate for cocksfoot and perennial ryegrass and the higher rate for Phalaris and Demeter fescue. Spray about 4 weeks after a full weed germination following the Autumn break. The perennial grasses must be at least 12 months old at spraying.
Spray topping to reduce seed set Chickpeas, Faba beans, Field peas, Lentils, Lupins, Vetch	Annual ryegrass	All States	400 or 800mL/ha	As an aid in managing annual ryegrass resistance. For use on escapes from a previous herbicide application in the current crop.  Spray the crop when the ryegrass is at the optimum stage, that is when the last ryegrass seed heads at the bottom of the plant have emerged and the majority are at or just past flowering (with anthers present or glumes open) but before haying off is evident - usually October to November. Use of the higher rate in these crops is usually more reliable and gives a greater reduction in seed set.  Reduction in crop yield may occur especially if the crop is less advanced relative to the ryegrass, that is if crops have a majority of green immature pods. The higher rate may also increase any yield reduction. In practice crop losses in excess of 25% may occur.  Apply by ground boom only in 50-100L/ha. Spray with a calibrated boom spray raised to give double overlap at the level of the ryegrass seed heads. Pressures of 250-350kPa and use of 110015 or 02 nozzles or equivalent will aid coverage.

Crop use or Situation	Weeds controlled	State	Rate	Critical Comments
Spray topping to reduce seed set Pastures	Grasses generally (particularly annual ryegrass)	All States	400mL/ha	Heavily graze paddocks during Spring flush to encourage even head development. Remove stock 2-3 weeks before the anticipated maturity date of the target species. However, if this is not feasible through lack of stock it is preferable to allow the pasture to mature ungrazed. Delay spraying until the last seed heads at the bottom of the plant have emerged and initial signs of haying off appear. Spray with a calibrated boom spray raised to give double overlap at the level of the seed heads.
Spray topping to reduce seed set	Barley grass	All States	400mL/ha	Manage paddocks as above. Spray after head emergence but when all seed heads are green and
Pastures				there is no sign of haying off. Inspect paddocks before returning stock. Provided spraying was carried out before hardening of grass seeds, stock (excepting horses) may be returned 24 hours after spraying. Where hardening seeds are present harrow to knock seed from the heads. DO NOT introduce lambs into paddock until safe from risk of seed injury. If seasonal conditions favour regeneration, stock should be returned to selectively graze new shoots. Spray with a calibrated boom spray raised to give double overlap at the level of the seed heads.
	Saffron thistle	NSW, SA, ACT only		Spray after the plant begins to run to head until flowering.
Prevention of annual ryegrass toxicity	Spray top - Graze to destroy seed heads	WA only	400mL/ha	Grazing management as for spray topping above. Remove stock 3-4 weeks before the anticipated maturity date. Spray must be applied within 10 days after emergence of the first ryegrass seed heads. To ensure adequate control of toxin development, heavy continuous grazing is essential from 1 day after spraying until the pasture has completely hayed off. The required stocking rate will vary but must be sufficient to keep all regrowth after spraying completely eaten off to prevent further growth producing new seed heads which could become toxic.
Hay freezing	Maximum retention of protein in standing dry feed	All States	800mL/ha	Graze paddocks as for spray topping above. Remove stock 3-4 weeks before the anticipated maturity date. Apply prior to commencement of haying off regardless of the grass species involved.  Spray with a calibrated boom spray raised to give
General Weed control Hops	Annual grasses	VIC, TAS only	1.2-1.6L/ha plus 1.1kg/ha Simagranz WG and/or 750mL- 1.4L/ha Reglone <sup>Ψ</sup>	double overlap at the level of the seed heads.  Apply as a directed inter-row spray prior to crop emergence from Winter dormancy, using a minimum of 250L/ha spray volume to ensure good and even coverage of weeds.
Orchards (including bananas) Vineyards	Annual weed control	QLD, VIC, SA, WA, TAS, NT only	1.6- 3.2L/sprayed ha <sup>Ψ</sup> Λ 160-320mL/ 100L/ha (a) see below 1.7L/sprayed ha <sup>Ψ</sup> Λ	Spray as necessary for control of annual weeds. Avoid contacting crop foliage. In bananas apply soon after weed emergence and before weeds reach 15cm in height. Use spraying pressure less than 240kPa. Avoid chemical contact with roots and peepers near the pseudo stem. Repeat sprays as required. Shirquat 250 will not harm trees or vines with mature brown bark if this alone is sprayed. Use the higher rate for dense weed growth. If Fat hen (Chenopodium album or Portulaca spp.) are present and Shirquat 250 rate is less than the
				ratio 800mL/100L add 200mL Agral* or 120mL BS1000 per 100L of spray mix.  Note: Spot spray rate assumes 1000L water/ha. For lower water volumes increase dilution rate as below: Water volume 250L/ha: use 640-1280mL/100L Water volume 500L/ha: use 320-640mL/100L Water volume 750L/ha: use 210-430mL/100L OR Measure how much spray is required to cover an area of 100 square metres using your normal application volume. Your dilution rate is 16-32mL of Shirquat 250 in this volume.

Crop use or Situation	Weeds controlled	State	Rate	Critical Comments
Peanuts Post-emergence (in crop)	Datura spp. (2-4 leaf) Annual ground cherry (2-3 leaf)	QLD, NT only	400mL/ha 600mL/ha	Spray peanuts up to 7-8 leaf stage but before majority of plants are flowering. Foliage will be scorched following application but plants recover
	Apple-of-Peru (2-4 leaf) Milkweed (2-3 leaf) Stagger weed (2-3 leaf)		600 mL/ha 600mL/ha 800mL/ha	rapidly. Apply in 200-250L/ha for thorough coverage of weed foliage. A dense canopy of weeds may reduce weed control due to shielding. Add 100mL
	Blue heliotrope (2-3 leaf) Wandering Jew (2-3 leaf) Anoda weed (2-3 leaf)		800mL/ha 800mL/ha 800mL/ha	Agral* or 60mL BS1000/100L of spray mix. DO NOT spray (on peanuts) under extremely hot dry conditions when peanuts are very small. In
	Bellvine (2-3 leaf) Common morning glory (2 leaf)		1L/ha 1L/ha	environments such as Far North Queensland use the lower rates in the range.
Potatoes	General Weed control (incrop)	All States	1.2-1.6L/ha <sup>Ψ</sup>	Spray at early crop emergence (no later than 25% emergence of potato shoots). Use the higher rate for dense weed growth.
	Pre-harvest weed control		2.8L/ha $^{\Psi}$	Spray about one week before digging and after tops have died down.
Row Crops, Vegetables and Market Gardens	Pre-planting and pre-crop emergence	All States	1.2-1.6L/ha <b>OR</b> 200mL/100L <sup>Ψ</sup> ^	To control weeds in seed beds. Treat no less than three days before sowing or before crop emergence. Use the lower rate for early autumn applications.
	Post-emergence inter-row weed control		1.2-1.6L/ha <b>OR</b> 200mL/100L <sup>Ψ</sup> ^	Apply after crop seedlings have emerged or when transplanted crops are established. Direct the spray so that it does not touch the crop. Use shielded nozzles.
	Seedling weeds			Seedling weeds - use the lower rate for early Autumn applications.
	Older weeds		2.4L or 400mL/100L <sup>Ψ</sup>	More mature stages of weed growth.
Non-Agricultural situations, around sheds, roadways, paths	Annual weed control	All States	1.6-4L/ha OR 200mL/100L <sup>Y</sup> ^	Spray to thoroughly wet weed growth. Shirquat 250 can be combined with soil residual herbicides Diurex® WG Herbicide or Simagranz WG Herbicide to give rapid knockdown and prolonged weed control. Use the higher rate for dense weed growth.
	Columbus grass	NSW only	^ Spot Spraying 160mL/100L plus 1L flupropanate Boomspray 2.3- 4.5L/ha plus 12.0- 22.0L/ha flupropanate	
Firebreaks	Knock down weed growth to eliminate fire hazard or	All States	1.6L-4L/ha	Apply mid-Winter to early Summer.
	assist firebreak burn			Use the higher rate for dense weed growth. After desiccation is complete the sprayed area may be burnt (normally 7-10 days after spraying).
				Shirquat 250 can be combined with soil residual herbicides Diurex WG Herbicide or Simagranz <sup>®</sup> WG Herbicide to give rapid knockdown and prolonged weed control.
Sugar Cane (Plant and ratoon)	Grass and some broadleaf weeds up to 5cm high	QLD, NSW, WA, NT only	1.2- 1.6L/sprayed ha	Apply as a broadcast spray over-the-top ofcplant cane up to the 3-4 leaf stage or ratoon cane up to 10cm high. Cane foliage will be scorched but new leaves will appear in 7-10 days. In plant cane between the 3-4 leaf stage and the formation of the true stem use a directed interspace spray. The Irvin spray boom (or other similar equipment) is the most
	Grass and some broadleaf weeds - enhancement with Diurex up to 5cm high		1.2-1.6L/ha +275g-500g/ha Diurex WG	spiral boom (or other similar equipment) is the most suitable equipment to avoid excessive drift onto cane foliage while spraying at the cane bases of plant and ratoon cane. After the formation of the true stem which is resistant to Shirquat 250, the sprayer height can be raised to overlap the spray pattern to give weed control in the stool. Use the higher rate for dense, more mature weeds. Shirquat 250 can be mixed with Atradex WG herbicide to give residual weed control when used as a blanket or directed spray - refer to the Atradex WG label for specific rates. It may also be mixed with Diurex WG at 2.8-3.9kg/ha for residual weed control. ^

Crop use or Situation	Weeds controlled	State	Rate	Critical Comments
Sugar Cane (Plant and ratoon)	Grass and some broadleaf weeds - enhancement with Diurex up to 10cm high Grass and some broadleaf weeds - enhancement with Diurex and short residual control >10cm high	As above	1.2-1.6L/ha +1kg/ha Diurex WG 1.6L/ha+ 2.8- 3.9kg/ha Diurex WG	To enhance activity of Shirquat 250 under favourable growing conditions and in open sunny conditions add Diurex WG at rates shown for weed size. Diurex WG at rates upto 500g/ha can be blanket sprayed. Use a directed spray for higher rates of Diurex WG.  Complete spray coverage is essential. For grasses and broadleaved weeds up to 5cm high use a minimum of 250L spray solution/ha, increase to 350L/ha for weeds up to 10cm high. Use a minimum spray volume of 400L/ha for weeds > 10cm high and for dense mature weeds. Always add Agral* at 200mL or BS1000 at 120mL/100L water.

<sup>&</sup>lt;sup>Ψ</sup> Capeweed or Erodium spp. present: Add Reglone at 750mL to 1.5L/ha (125mL to 250mL/100L for high volume spraying). Use higher rate for plants more than 10cm diameter.

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

FOR USE ONLY AS AN AGRICULTURAL AND HORTICULTURAL HERBICIDE, THIS PRODUCT IS TOO HAZARDOUS TO BE USED IN THE HOME GARDEN.

# WITHHOLDING PERIOD

DO NOT GRAZE OR CUT SPRAYED VEGETATION FOR STOCK FOOD FOR AT LEAST 1 DAY, OR GRAZE HORSES FOR 7 DAYS AFTER APPLICATION.

REMOVE STOCK FROM TREATED AREAS 3 DAYS BEFORE SLAUGHTER.

CHICK PEAS, FABA BEANS, FIELD PEAS, LENTILS, LUPINS AND VETCH- DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

PLEASE NOTE EXTRA WETTER REQUIREMENTS FOR HIGH VOLUME SPRAYING.

**GENERAL INSTRUCTIONS**Resistant Weeds Warning



Shirquat 250 Herbicide is a member of the bipyridyls group of herbicides. Shirquat 250 has the inhibitor of photosynthesis at photosystem I mode of action. For weed resistance management Shirquat 250 is a Group L herbicide. Some naturally-occurring weed biotypes resistant to Shirquat 250 and other Group L 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 byShirquat 250 or other Group L herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Crop Care Australasia Pty Ltd accepts no liability for any losses that may result from the failure of Shirquat 250 to control resistant weeds.

This product kills annual grasses and most annual broadleaf weeds (excluding capeweed) in specified situations and should not be used for any other purpose. Quickly kills green plant tissue on contact. Is immediately inactivated in the soil. At spraying, weeds should be growing vigorously and must not be covered with soil or heavy dew. The principle of selective weed control with this product is that annual weeds are killed but perennial plants and clovers recover after an initial scorch. The control of annual weeds by spraying with this product will allow the desirable perennial species to thicken up at the expense of the weeds. Moisture and fertility should not be limiting at spraying and the proportion of desirable species must be great enough for them to fill in the areas previously occupied by weeds. Long-term weed control can be obtained following the quick knockdown given by this product if it is combined with soil residual chemicals.

1. DO NOTuse hand-held ultra low volume controlled droplet applicators (CDA units), boomless jets or misting-machines.

# 2. Mixing

Add the required quantity of product to water in the spray tank and agitate to give even mixing. Agitate again if left standing.

# 3. Wetting agent

This product contains a wetting agent and additional wetter is not required unless high volume spraying results in excessive dilution of wetter content. This will occur when product rates fall below 400mL/100L. Under such circumstances wetter should be added at the rate of 100mL of Agral\* or 60mL of BS1000/100L of spray mix. Where Fat Hen or Portulaca are present in orchard or vineyard situations, extra wetter should be used when this product ratio is less than 800mL/100L. Add wetter at double the above recommendations. DO NOT use alkaline or anionic wetting agents.

#### 4. Clean water

Mix this product with clean water only. Water should be clean and free from clay, silt and algae. Providing it meets this requirement, saline water, water collected from roofs, bore water, dam water from creeks may be used.

# 5. Application

# (i) Cereals and Broadacre Spraying

Use only through a properly calibrated boom spray which should be fitted with flat fan jets and adjusted to a height to give at least double overlap of the spray at the top of the weeds being sprayed. It is essential that a good marking system be used. If a disc marker is used, it must be mounted so as to turn the soil back on to the area sprayed. It is essential to obtain good leaf coverage with the spray and

<sup>^</sup> If Shirquat 250 rate is less than the ratio 400mL/100L add 100mL Agral\* or 60mL BS1000 per 100L of spray mix. Wetting Agent: (a) Add 170mL Agral\* or 100mL BS1000 per 100L

volumes of dilute spray must be adjusted according to density of weed growth. 100L/ha may be used for seedlings or well grazed weeds up to 2cm high. For plant height 2-5cm use 150L/ha and up to 6-10cm use 200L/ha. Spray volumes may be as low as 50L/ha (30L/ha in WA) for weed growth below 5cm high, or for spray topping and hay freezing. Equipment must be appropriate to this volume, properly calibrated and fitted with spraying tips designed to give a medium spray quality (ASAE S572) at the target.

# (ii) High Volume Application

Higher volumes will generally be required to give good coverage of weed growth in situations other than those specified under cereals and other broadacre crops.

(iii) Wash spray equipment with clean water immediately after use. This product is highly corrosive to metals, particularly galvanised iron and aluminium and should not be left for long periods in tanks or equipment made of these materials.

For ground application only - DO NOT use this formulation through aircraft, misting machines or hand-held ultra low volume controlled droplet applicators (CDA units).

### 6. Compatibility

This product combines satisfactorily with the soil active herbicides Atradex® WG, Diurex® WG and Simagranz ®WG where prolonged weed control is required as well as a quick knockdown. This product is compatible with Agral\*, BS1000®, Reglone\*, Spray.Seed\* 250, Revolver®, Banvel 200, Banvel M, MCPA Amine (no more than 1L per 800mL Shirquat® 250), Glean\*, Yield\*, Avadex®, Crop Care Trifluralin 480 and Striker® (oxyfluorfen).

#### 7. Spraying conditions

Avoid spraying plants under stress from waterlogging, frost, drought etc. or covered with dust and soil. Results will be better if application is made in dull weather or at the end of the day. Light rain following spraying will not affect results. Avoid drift into neighbouring crops.

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

DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto susceptible plants/crops, cropping lands or pastures. This formulation should not be applied on or near water which is used for irrigation purposes.

#### PROTECTION OF LIVESTOCK

Domestic pets and poultry - keep away from treated areas. This formulation should not be applied on or near water which is used for livestock watering.

#### PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT:

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. This formulation should not be applied on or near water which is used for human consumption, livestock watering or irrigation purposes or water used for commercial or recreational fishing.

#### STORAGE AND DISPOSAL:

Store in the closed, original container in a dry, cool, well-ventilated locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight. The method of disposal of the container depends on the container type. Read the Storage and Disposal instructions on the label that is attached to the container.

### **SAFETY DIRECTIONS:**

Very dangerous, particularly the concentrate. Product is poisonous if swallowed. Will irritate the nose, throat and skin. Attacks eyes. Protect eyes while using. Avoid contact with eyes, skin and clothing. When opening the container and preparing for use, wear elbowlength PVC gloves, face shield or goggles. If product on skin, immediately wash area with soap and water. If clothing becomes contaminated with product, remove clothing immediately. If product in eyes, wash it out immediately with water. Avoid contact with spray mist. DO NOT inhale spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and face shield or goggles and contaminated clothing.

# **SPRAY APPLICATION**

- DO NOT work in spray mist
- DO NOT continue to use if skin irritation or nose bleed occurs. This may be caused by exposure to spray mist as the result of incorrect use of equipment or adverse climatic conditions. Stop and review handling and spraying techniques before further spraying. If symptoms persist seek medical advice.
- When there is a risk of exposure to spray mist wear waterproof footwear and waterproof protective clothing, impervious gauntlet length gloves (rubber or PVC), goggles and a face mask and respirator covering nose and mouth and capable of filtering spray droplets. A high efficiency type particulate respirator is recommended, but in any event use a respirator which complies with the requirements of AS1716 (Standards Association of Australia). Further advice on safety equipment should be obtained from a safety equipment manufacturer.
- Avoid contacting vegetation wet with spray, but if necessary to do so wear waterproof footwear and waterproof protective clothing and gloves.

#### FIRST AID:

If poisoning occurs get to a doctor or hospital quickly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

# **NOTE TO PHYSICIANS**

For additional advice on the treatment of paraquat poisoning please consult the booklet "The Treatment of Paraquat Poisoning: AGuide for Doctors".

# **MATERIAL SAFETY DATA SHEET:**

Additional information is listed in the Material SafetyData Sheet which can be obtained from your supplier.or from the Crop Care website ---www.cropcare.com.au

In case of emergency: Phone 1800 033 498

Ask for shift supervisor. Toll free 24 hours.

#### Conditions of sale

Crop Care Australasia Pty Ltd will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply of these goods other than responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of these goods. To the extent allowed by such Statutes the liability of Crop Care Australasia Pty Ltd is limited to the replacement of the goods or (at the option of Crop Care Australasia) the refund of the price paid and where possible sufficient part of the goods to enable proper examination being returned to Crop Care Australasia Pty Ltd within thirty days of delivery.

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- ® Roundup Ready is a registered trademark of Monsanto Technology LLC.
- \* Other registered trademarks

BIPYRIDILIUM PESTICIDE LIQUID, TOXIC, (contains paraquat) UN No. 3016	TOXIC
PG III HAZCHEM 2X	6
IN A TRANSPORT EMERGENCY DIAL 000 POLICE OR FIRE BRIGADE	SPECIALIST ADVICE IN AN EMERGENCY ONLY 1800 033 498 ALL HOURS – AUSTRALIA WIDE