

# POISON

KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING



# THISTROL™ GOLD

SELECTIVE HERBICIDE

## ACTIVE CONSTITUENTS:

300 g/L MCPB (present as the dimethylamine salt),  
20 g/L MCPA (present as the dimethylamine salt) and  
10 g/L Flumetsulam

**GROUP B I HERBICIDE**

For the post-emergence control of certain broadleaf weeds in clovers, medics and grass pastures as specified in the Direction for Use.



**RESTRAINTS**

**DO NOT** apply to plants which may be stressed (not actively growing) due to prolonged periods of extreme temperature (less than 5°C or greater than 30°C), moisture stress (water-logged or drought affected), poor nutrition, disease, insect damage or previous herbicide treatment (e.g. triazines or sulfonyleureas) as reduced levels of control may result.

**DO NOT** apply if any rain is likely within 6 hours or if heavy rains or storms are forecast within 48 hours.

**DO NOT** irrigate (any method) for 6 hours, or to the point of runoff for at least 48 hours, after application.

**DO NOT** slash or mow pastures within 7 days before or after spraying.

**DO NOT** allow stock to graze paddocks with poisonous plants until these plants have died down as they can become more palatable after spraying.

**DO NOT** apply by spraying equipment carried on the back of the user.

**SPRAY DRIFT RESTRAINTS**

Specific definitions for terms used in this section of the label can be found at [www.apvma.gov.au/spraydrift](http://www.apvma.gov.au/spraydrift)

**DO NOT** allow bystanders to come into contact with the spray cloud.

**DO NOT** apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone tables below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

**DO NOT** apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

**DO NOT** apply if there are surface temperature inversion conditions present at the application site during the time of application. These conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

**BOOM SPRAYERS (ground application)**

**DO NOT** apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a COARSE spray droplet size category
- minimum distances between the application site and downwind sensitive areas are observed (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers').

**Buffer zones for boom sprayers**

Application rate	Boom height above the target canopy	Mandatory buffer zones				
		Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
2 L/ha or less	0.5 m or lower	Not required	5 metres	Not required	70 metres	Not required
	1.0 m or lower		30 metres		220 metres	
2 L/ha up to the maximum label rate 4 L/ha	0.5 m or lower		20 metres		160 metres	

**VERTICAL SPRAYERS**

**DO NOT** apply by a vertical sprayer.

**AIRCRAFT**

**DO NOT** apply by fixed-wing aircraft.

**DO NOT** apply by aircraft unless the following requirements are met:

- spray droplets not smaller than a COARSE spray droplet size category
- for maximum release heights above the target canopy of 3 metres or 25% of rotor diameter whichever is the greatest
- minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for aircraft') are observed.

**Buffer zones for aircraft**

Type of aircraft	Mandatory buffer zones				
	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
Helicopter 2 L/ha or less	Not required	75 metres	Not required	400 metres	Not required
Helicopter 2 L/ha up to the maximum label rate 4 L/ha	Not required	120 metres	Not required	800 metres	Not required

## DIRECTIONS FOR USE

TABLE 1: Clovers, medics and grass pastures (including mixed clover/grass and medic/grass pastures)

CROP	CROP GROWTH STAGE	WEEDS	RATE	CRITICAL COMMENTS
Clovers, Medics	Apply when clovers and medics have at least 2 trifoliolate leaves	Refer to <b>Table 2: Weeds controlled</b>	2 – 4 L/ha + Banjo Spray Adjuvant @ 0.5% v/v	<p><b>Minimum spray volume 80 L/ha for optimum results.</b> Refer table 2 for rate selection.</p> <p>Thistrol Gold can cause transient crop effects (leaf spotting and biomass reduction). Recovery is expected with good growing conditions.</p> <p>Refer to Pasture Safety section of general instructions for information on tolerance.</p> <p><b>DO NOT</b> apply more than 2 L/ha to medic crops. <b>DO NOT</b> apply to Berseem clover. <b>DO NOT</b> apply more than 2 L/ha for seed crops.</p>
Grass pastures	Apply from Z13 onwards			

TABLE 2: Weeds controlled

Best control is achieved on small, actively growing plants. Exceeding the age/size restrictions may reduce control of those weeds to suppression at best. Always use the correct rate as indicated below to ensure control of weeds.

WEED (common name)	WEED (scientific name)	WEED GROWTH STAGE		CRITICAL COMMENTS
		Up to leaf no.	Up to weed size (cm)	
Amsinckia	<i>Amsinckia</i> spp.	10 leaf	10 cm diameter	Use 2 L/ha for control
Ball mustard	<i>Neslia paniculate</i>	6 leaf	5 cm diameter	Use 2 L/ha for control
Buchan weed	<i>Hirschfeldia incana</i>	8 leaf	10 cm diameter	Use 4 L/ha for control
Caltrop	<i>Tribulus terrestris</i>	4 leaf	-	Use 4 L/ha for control
Capeweed	<i>Arctotheca calendula</i>	4 leaf	10 cm	Use 2 L/ha for control
Charlock	<i>Sinapis arvensis</i>	8 leaf	10 cm diameter	Use 2 L/ha for control. Spray Charlock as soon as possible after the Autumn break. Larger plants and any affected by stress or grazing prior to treatment may re-grow and flower
Chickweed	<i>Stellaria media</i>	4 leaf	10 cm diameter	Use 4 L/ha for control
Common Cotula (Carrot weed)	<i>Cotula australis</i>	4 leaf	10 cm diameter	Use 2 L/ha for control
Cotula (Water Buttons)	<i>Cotula coronopifolia</i>	4 leaf	10 cm diameter	Use 2 L/ha for control
Deadnettle	<i>Lamium amplexicaule</i>	6 leaf	-	Use 4 L/ha for control
Dock (seedlings)	<i>Rumex</i> spp.	2 leaf	5 cm diameter	Use 2 L/ha for control
Doublegee	<i>Emex australis</i>	6 leaf	10 cm diameter	Use 4 L/ha for control
Dwarf marigold	<i>Schkuhria pinnata</i>	10 leaf	15 cm high	Use 2 L/ha for control
Dwarf nettle	<i>Urtica urens</i>	6 leaf	5 cm high	Use 4 L/ha for control
Fat hen	<i>Chenopodium album</i>	15 leaf	20 cm high	Use 2 L/ha for control
Hedge mustard	<i>Sisymbrium officinale</i>	8 leaf	10 cm diameter	Use 2 L/ha for control
Indian hedge mustard	<i>Sisymbrium orientale</i>	8 leaf	10 cm diameter	Use 2 L/ha for control
Lupins	<i>Lupinus</i> spp.	10 leaf	10 cm high	Use 2 L/ha for control
Marshmallow	<i>Malva parviflora</i>	5-8 leaf	10 cm diameter	Use 4 L/ha for control
Musky Storksbill	<i>Erodium moschatum</i>	12 leaf	10 cm diameter	Use 4 L/ha for control
New Zealand spinach	<i>Tetragonia tetragonoides</i>	4 leaf	5 cm diameter	Use 4 L/ha for control
Oxtongue	<i>Helminthotheca echioides</i>	4 leaf	5 cm	Use 4 L/ha for control

WEED (common name)	WEED (scientific name)	WEED GROWTH STAGE		CRITICAL COMMENTS
		Up to leaf no.	Up to weed size (cm)	
Paterson's curse	<i>Echium plantagineum</i>	8 leaf	10 cm diameter	Use 4 L/ha for control
Peppergrass	<i>Lepidium africanum</i>	10 leaf	15 cm diameter	Use 4 L/ha for control
Pheasant's eye	<i>Adonis microcarpa</i>	8 leaf	10 cm high	Use 2 L/ha for control
Prickly Lettuce	<i>Lactuca serriola</i>	6 leaf	5 cm	Use 2 L/ha for control
Saffron thistle	<i>Carthamus lanatus</i>	5 leaf	5 cm	Use 2 L/ha for control
Sandrocket (Lincoln weed)	<i>Diploaxis tenuifolia</i>	8 leaf	10 cm diameter	Use 4 L/ha for control
Shepherd's purse	<i>Capsella bursa-pastoris</i>	8 leaf	10 cm diameter	Use 2 L/ha for control
Sorrel (seedling)	<i>Rumex acetosella</i>	3 leaf	5 cm diameter	Use 2 L/ha for control
Sow thistle	<i>Sonchus oleraceus</i>	6 leaf	10 cm diameter	Use 2 L/ha for control
Spear thistle	<i>Cirsium vulgare</i>	Rosette	12 cm diameter	Use 4 L/ha for control
Stagger weed	<i>Stachys arvensis</i>	6 leaf	-	Use 4 L/ha for control
Stemless thistle	<i>Onopordum acaulon</i>	3 leaf	3 cm diameter	Use 4 L/ha for control
Three-horned bedstraw	<i>Galium tricornutum</i>	6 whorls	10 cm high	Use 2 L/ha for control
Turnip Weed	<i>Rapistrum rugosum</i>	12 leaf	10 cm diameter	Use 2 L/ha for control
Volunteer canola	<i>Brassica napus</i>	8 leaf	10 cm diameter	Use 2 L/ha for control
Ward's weed	<i>Carrichtera annua</i>	8 leaf	10 cm diameter	Use 2 L/ha for control
White ball mustard	<i>Calepina irregularis</i>	8 leaf	10 cm diameter	Use 2 L/ha for control
Wild radish	<i>Raphanus raphanistrum</i>	6 leaf	5 cm diameter	Use 4 L/ha for control
Wild turnip	<i>Brassica tournefortii</i>	10 leaf	10 cm diameter	Use 2 L/ha for control
Wireweed	<i>Polygonum aviculare</i>	6 leaf	5 cm	Use 2 L/ha for control

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

#### GRAZING/STOCK FOOD WITHHOLDING PERIODS

**DO NOT GRAZE OR CUT FOR STOCK FOOD OR HARVEST FOR SEED FOR 7 DAYS AFTER APPLICATION.**

#### LIVESTOCK DESTINED FOR EXPORT MARKET

The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period that the Export Slaughter Interval is observed before stocks are sold for export slaughter.

#### EXPORT SLAUGHTER INTERVAL (ESI) - 7 days:

After observing the withholding period for grazing or cutting for stock food, livestock that have been grazed or fed treated crops should be placed on clean feed for 7 days prior to slaughter.

#### EXPORT ANIMAL FEED INTERVAL (EAFI) - 28 days:

A minimum period of 28 days must elapse between the application of Thistrol Gold Selective Herbicide and grazing or cutting the treated pasture as stockfeed for livestock intended for export.

**GENERAL INSTRUCTIONS****PASTURE SAFETY**

The following pasture species have been assessed for crop safety. Certain species/varieties may show different levels of crop safety. Call your Nufarm representative for more advice.

**Clover (*Trifolium* spp.)**

Arrowleaf clover, Balansa clover, Persian clover, Rose clover, Strawberry clover, Subterranean clover and White clover.

**Medic (*Medicago* spp.)**

Barrel medic, Snail medic, Spineless burr medic and Strand medic.

Medic crops should be treated early and delays in application could result in crops having insufficient time to recover from the temporary pause in growth with the use of this product. Medic crops are also sensitive to environmental stress which can compound stress and biomass recovery caused by Thistrol Gold.

**Grasses**

Italian ryegrass, Perennial ryegrass, Cocksfoot, Tall fescue and Phalaris.

**DO NOT** use on Lucerne.

**MINIMUM RE-CROPPING INTERVALS**

The actives found in Thistrol Gold are broken down in the soil by microbial activity. Warm, moist soil conditions favour highest microbial activity and quickest residue breakdown. For the recropping periods NNSW & QLD refers to summer dominant rainfall areas, where crops are grown on deep black earth soils (vertisols), with no impermeable sub-horizon in the top 30cm. SNSW, Vic, Tas, SA and WA refers to winter dominant rainfall areas on soils with no impermeable sub-horizon in the top 30 cm. Also see comments on rainfall and soil type below.

CROP	RATE	REGION	
		NNSW, QLD	SNSW, Vic, Tas, SA, WA
Cereal rye, medics, triticale, wheat, maize or soybeans	2 L/ha or 4 L/ha	Allow 7 days to elapse after application before sowing these crops	Allow 7 days to elapse after application before sowing these crops
Barley, chickpeas, clover, filed peas, lucerne, oats and peanuts	2 L/ha	Allow 3 months to elapse after application before sowing these crops.	Allow 3 months to elapse after application before sowing these crops.
	4 L/ha	Allow 6 months to elapse after application before sowing these crops.	Allow 9 months to elapse after application before sowing these crops.
Canola, faba beans, fenugreek, lathyrus, lentils, lupins, serradella, sorghum, sunflowers, Popany vetch	2 L/ha	Allow 6 months to elapse after application before sowing these crops.	Allow 9 months to elapse after application before sowing these crops.
	4 L/ha	Allow 9 months to elapse after application before sowing these crops.	Allow 12 months to elapse after application before sowing these crops.
Cotton	2 L/ha or 4 L/ha	Allow 24 months to elapse after application before sowing these crops.	Allow 24 months to elapse after application before sowing these crops.

**Rainfall is required to maintain soil wetness for at least one week over the warm months to enable microbial degradation of herbicide residues to allow safe planting of sensitive crops.** For SNSW, Victoria, Tasmania, SA and WA a minimum of 25 mm and preferably 50 mm or more rain must have fallen over the warm months of the year. For NNSW and Qld a minimum of 50 mm and preferably 100 mm rain or more must have fallen over the warm months of the year.

**Soil type – on shallow, duplex, low organic matter soils with an impermeable sub-horizon within the root zone (30 cm deep or less) and alkaline surface soil, sensitive crops should not be planted until 2 years after application of Thistrol Gold at either 2 or 4 L/ha.** (For crops grown in NNSW and Qld on soils other than vertisols, call your Nufarm representative for more advice).

**Where Thistrol Gold residue carryover is suspected and susceptible crops are to be planted, test the treated area as follows:** Where rain or irrigation allows, plant a small area of the susceptible crop 4 to 6 weeks before desired planting date and take note of any symptoms of injury. If any herbicide symptoms are observed, only plant a winter cereal.

**Pot bioassay –** Where not practical to do field bioassay, plant a small number of seeds of the susceptible crop into pots containing soil from the treated field. Do this test 4 to 6 weeks before desired planting date. If any herbicide symptoms are observed, only plant a cereal crop. Canola and cotton are highly sensitive to Thistrol Gold and therefore are a good test species for a bioassay.

**MIXING**

To ensure even mixing, half-fill the spray tank with clean water and add the required amount of product. Add spray additive and agitate thoroughly, then add the remainder of the water. Agitate again before spraying commences. **DO NOT** tank mix with other herbicides.

**APPLICATION**

Good spray coverage is essential for maximum results. Spray equipment must be checked and calibrated accurately prior to application.

**Ground application:** Check height of boom above the target weeds to ensure the spray is evenly distributed and a double overlap pattern is obtained. An even distribution of droplets with a COARSE or VERY COARSE spray droplet size according to nozzle manufacture specifications is recommended to maximise efficacy and minimise the likelihood of spray drift. Minimum spray volume 80 L/ha for optimum results.

**Aerial application:** The product may be applied in a minimum 30 L of water per hectare. The use of the higher volumes is preferred due to more reliable results. Spray quality should be COARSE and swath width should not be wider than recommended for type of plane and application unit.

**CLEANING SPRAY EQUIPMENT**

After using Thistrol Gold, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose. Drain the tank and clean any filters in the tank, pump, lines and nozzles.

- **To rinse.** After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.
- **To decontaminate.** Before spraying sensitive crops (which include canola, cotton, faba beans, lupins, sorghum and sunflowers), wash the tank and rinse the system as above. Quarter fill the tank and add an alkali detergent at 500 mL/100 L or 500 g/100 L of water and circulate throughout system for at least fifteen minutes. Drain the whole system. Remove filter and nozzles and clean them separately. Finally flush the system with cold water and allow to drain. Chlorine based cleaners are not recommended. Nufarm tank and Equipment Cleaner is not recommended.

**Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto unused land away from desirable plants and watercourses.**

**SPRAY APPLICATIONS AND DRIFT RISK ASSESSMENT**

For aerial application it is recommended where possible for this product to be applied by an aerial applicator business that holds current accreditation for the Aerial Improvement Management System –“AIMS”, issued by the Aerial Agricultural Association of Australia Ltd.

Checklist:

- Have you cleaned/decontaminated your boom sprayer?
- Have you contacted your neighbour prior to spraying?
- Is your sprayer set-up correctly for the particular application?
- Check
  - boom calibration
  - at nozzle - nozzle choice
  - low drift/what spray quality
  - coarse or larger spray quality?
  - boom height - speed of intended application
  - water volume
- You must check, determine and record the weather conditions immediately prior to, and immediately after the spray application is made.
- Record
  - temperatures
  - relative Humidity
  - delta T
  - wind speed
  - is there a temperature inversion?
- Night Spraying - Extra care is required to ensure that inversion conditions are not present. Use smoke generator to determine wind direction and presence of inversion conditions.

For further information refer to [nufarm.com.au/spraywise](http://nufarm.com.au/spraywise)



[spraywisedecisions.com.au](http://spraywisedecisions.com.au) is an online weather forecasting program and is recommended for use when planning your pesticide application

**RESISTANT WEEDS WARNING**

GROUP	B	I	HERBICIDE
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Thistrol Gold Selective Herbicide is a member of the Triazolopyrimidine sulfonanilide (sulfonamide) and Phenoxy groups of herbicides. The product has the acetolactate synthase (ALS) inhibitor and disruptors of plant cell growth modes of action. For weed resistance management, the product is a Group B and a Group I herbicide.

Some naturally occurring weed biotypes resistant to the product and other Group B and Group I herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or other Group B or Group I herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any losses that may result from the failure of this product to control resistant weeds.

**COMPATIBILITY****Herbicides**

**DO NOT** tank mix with other herbicides.

**Adjuvants**

Banjo Spray Adjuvant

**Insecticides**

Imidan Insecticide/Miticide, Astral 250EC Insecticide/Miticide, Kaiso 240EC

**Plant growth regulators**

Ryzup SG Plant Growth Regulator Soluble Granules

**RE-ENTRY STATEMENT**

**DO NOT** allow entry into treated areas until spray has dried.

**PROTECTION OF CROPS, NATIVE AND OTHER NONTARGET PLANTS**

Refer to MINIMUM RE-CROPPING INTERVALS for crop rotation information. Crops susceptible to Thistrol Gold include but are not limited to canola, cotton, faba beans, lupins, sorghum and sunflowers.

Dangerous to aquatic plants and susceptible crops. **DO NOT** contaminate dams, channels or drains with the product or used containers.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

Very toxic to aquatic life. **DO NOT** contaminate streams, rivers or waterways with the product or used containers.

**STORAGE AND DISPOSAL**

Store in the closed, original container in a dry, cool well-ventilated area out of direct sunlight. Protect from frost. Keep out of reach of children. **DO NOT** store near food.

**Non-refillable containers**

Triple-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 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.

**Refillable containers**

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

**SAFETY DIRECTIONS**

Will damage eyes. Avoid contact with eyes. When opening the container and preparing the product for use, wear cotton overalls buttoned to the neck and wrist, elbow-length chemical resistant gloves and face shield or goggles. When applying by boom spray equipment, wear cotton overalls (over normal clothing) buttoned to the neck and wrist and a washable hat. If product or spray in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

**FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26; New Zealand 0800 764 766.

**ADDITIONAL STATEMENTS (WHS REGULATIONS 2011)**

**Causes serious eye irritation.** If medical advice is needed, have product container or label at hand. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention. If skin contact occurs remove contaminated clothing and wash skin thoroughly with soap and water. If swallowed, rinse mouth and then drink plenty of water. **DO NOT** induce vomiting.

**SAFETY DATA SHEET**

For further information refer to the Safety Data Sheet (SDS), which can be obtained from your supplier or the Nufarm website – [nufarm.com.au](http://nufarm.com.au)

**In case of emergency: Phone 1800 033 498** Ask for shift supervisor. Toll free 24 hours.

**CONDITIONS OF SALE**

"Any provisions or rights under the Competition and Consumer Act 2010 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

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