

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

Chipco Ronstar[®] G

SELECTIVE HERBICIDE

Active Constituent: 20 g/kg OXADIAZON

GROUP **G** HERBICIDE

For the control of certain weeds in woody ornamental shrubs and trees in nurseries or in turf as specified in the DIRECTIONS FOR USE table

GENERAL INSTRUCTIONS

Resistant Weeds Warning

Chipco Ronstar G Selective Herbicide is a member of the Oxidiazole group of herbicides. **Chipco Ronstar G** has the inhibitors of protoporphyrinogen oxidase mode of action. For weed resistance management, **Chipco Ronstar G** is a Group G Herbicide. Some naturally occurring weed biotypes resistant to **Chipco Ronstar G** and other inhibitors of protoporphyrinogen oxidase herbicide 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 **Chipco Ronstar G** or other inhibitors of protoporphyrinogen oxidase herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Bayer CropScience accepts no liability for any losses that may result from the failure of **Chipco Ronstar G** to control resistant weeds.

This product is a pre-emergent herbicide. Control of germinating weed seedlings can be expected for up to 10 weeks after application.

NOTE ON ORNAMENTALS: **Chipco Ronstar G** has been used on a wide range of ornamental plant species without damage. However, some species and varieties are particularly sensitive to chemical products. As this sensitivity could be related to local conditions, it is advisable to treat only a small number of plants first, in order to determine their reaction to the product, before treating a whole crop.

Tolerant Nursery Species: Some of the species of the genera listed below have been shown to tolerate **Chipco Ronstar G** at a dose rate of 20g per square metre.

Abelia	Bauhinia	Cuphea	Hakea	Kunzea	Metrosideros	Ravenala
Acacia	Boronia	Cupressus	Hebe	Lagerstroemia	Monstera	Rosa
Acalypha	Browallia	Dampiera	Helichrysum	Lantana	Nerium	Rosmarinus
Agapanthus	Callistemon	Dodonaea	(perennial)	Lavandula	Omolanthus	Russelia
Agonis	Callitris	Eriostemon	Hemiandra	Leea	Pandorea	Schefflera
Allamanda	Camellia	Escallonia	Hibbertia	Leptospermum	Phoenix	Sollya
Ardisia	Chamelaucium	Eucalyptus	Ixora	Leucodendron	Photinia	Viburnum
Araucaria	Coleonema	Eutaxia	Jasminum	Leucospermum	Prostanthera	Weigela
Azalea	Coprosma	Gardenia	Juniperus	Macrozamia	Protea	Westringia
Banksia	Cotoneaster	Grevillea	Kennedia	Melaleuca		

APPLICATION

Apply using a properly calibrated granular applicator which will apply the granules in a uniform pattern. Uniform application is essential for satisfactory weed control. Calibrate the applicator prior to use according to the manufacturer's instructions, and check applicator frequently to ensure that the equipment is working properly. After application, ensure granules are washed or brushed off the foliage, particularly the foliage of prostrate and dense ground-cover plants. DO NOT apply granules when foliage is wet.

Turf

As above. Ensure that the turf area is free of leaves and other debris, mowing if necessary, so that the granules reach the soil surface. Measure the area to be treated and apply the required amount using a properly calibrated granular applicator as above. Oscillating spout and rotary type fertilizer spreaders are recommended for large areas. Activity of this product is dependent on moist soil conditions. If rain is not received within 2 days after application, apply thorough sprinkler irrigation to wash granules off the leaves and help distribute the granules on the soil surface.

DO NOT apply granules when the turf foliage is wet,

If the soil is to be top-dressed with fertilizer, DO NOT apply this product until the top-dressing operation is completed.

Plant-Back Periods

Ryegrass: Allow four months after last application to lapse before reseeding.

Bentgrass: Allow five months after last application to lapse before reseeding.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Shake empty into granule applicator. DO NOT dispose of undiluted chemicals on site. Puncture or shred and bury empty containers in a local authority landfill. If no landfill is available bury the empty containers below 500 mm 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

Avoid contact with eyes. Do not inhale dust. Wash hands after use.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet.

EXCLUSION OF LIABILITY

This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

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NRA Approval No.: 46837/1002

FOR 24 HOUR SPECIALIST ADVICE IN EMERGENCY ONLY PHONE 1800 033 111
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DIRECTIONS FOR USE

Restraints

DO NOT mix granules with the soil.

DO NOT apply to newly seeded turf areas.

DO NOT apply to soft, annual flowering plants, ferns or bulbs unless they are listed as tolerant species.

DO NOT use in glasshouses or poorly ventilated polyhouses.

SITUATION	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS		
Container- grown woody ornamental shrubs, trees and vines. (See list of tolerant species)	Bittercress (Flickweed) (<i>Cardamine hirsuta</i>) Creeping Oxalis (Yellow Wood Sorrel) (<i>Oxalis corniculata</i>) Petty Spurge (<i>Euphorbia peplus</i>) Sorrel (<i>Rumex acetosella</i>) Sowthistle (<i>Sonchus</i> spp.)	All States	200 kg per ha OR 20 g/m ²	Apply to soil surface of newly potted or freshly weeded containers. Repeat applications may be made at 10 week intervals.		
				Rate For Individual Container Sizes		
				Container Size	Amount required per container	
					Round Container	Square Container
	10.2 cm (4 in)	0.16 g	0.21 g			
	15.2 cm (6 in)	0.4 g	0.5 g			
	25.4 cm (10 in)	1.0 g	1.3 g			
	40.6 cm (16 in)	2.6 g	3.3 g			
	50.8 cm (20 in)	4.1 g	5.2 g			
Field-grown ornamental crops Transplants only: Aster, Carnation, Chrysanthemum Seed and Transplant Gypsophila.	Trefoils (Lotus) (<i>Lotus</i> spp.) Willow Herbs (<i>Epilobium</i> spp.) Winter Grass (Goosegrass) (<i>Poa annua</i>)	NSW only		Apply to freshly weeded flower beds. Repeat applications at 10 week intervals. DO NOT apply to Zinnia or annual Helichrysum seed or transplants.		
Recreational Turf: includes fairways, golf tees, municipal sports fields, industrial and commercial lawns. Warm season turfgrass species only: Bahia Grass (<i>Paspalum notatum</i>), Buffalo grass (<i>Stenotaphrum secundatum</i>), Common Couch (<i>Cynodon dactylon</i>), (NOT Santa Anna) Hybrid Couch (<i>Cynodon dactylon</i> C. <i>transvaalensis</i>), Kikuyu (<i>Pennisetum clandestinium</i>), Queensland Blue Couch (<i>Digitaria didactyla</i>), Saltwater Couch (<i>Paspalum vaginatum</i>), Zoysia (<i>Zoysia matrella</i>)	Crowsfoot Grass (<i>Eleusine indica</i>), Summer Grass (<i>Digitaria ciliaris</i>)#	All States	150 kg per ha (1.5 kg per 100 m ²)	Apply prior to germination of the weeds (usually from late winter to early Spring, late August to early September). #Summer grass will be suppressed at this rate. DO NOT apply on turf containing Carpet Grass (<i>Axonopus</i> spp.), Centipede Grass (<i>Eremochloa ophiuroides</i>) and Dichondra unless some damage is acceptable. Avoid contact with flowers and shrubs except as directed elsewhere in this document. Owing to the varying cultivation practices used, it is not recommended to apply this product on putting greens and bowling greens. Refer to the General Instructions for more details on application and plant back periods.		
	Winter grass (<i>Poa annua</i>) Creeping oxalis (Yellow Wood Sorrel) (<i>Oxalis corniculata</i>)	All States	200kg per ha (2.0kg per 100m ²)	Apply prior to germination of the weeds (usually from late summer to mid-autumn, February to May, and early spring, August to October). DO NOT apply on turf containing Carpet Grass (<i>Axonopus</i> spp.), Centipede Grass (<i>Eremochloa ophiuroides</i>) and Dichondra unless some damage is acceptable. Avoid contact with flowers and shrubs except as directed elsewhere in this document. Owing to the varying cultivation practices used, it is not recommended to apply this product on putting greens and bowling greens. Refer to the General Instructions for more details on application and plant back periods.		

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

MATERIAL SAFETY DATA SHEET

Chipco® Ronstar® G Selective Herbicide

Date of Issue: October 22, 2002

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Chipco® Ronstar® G Selective Herbicide
Other names: None
Product code: EXP03621A
SAP product code: 16935 (15 kg)
Recommended use: Herbicide for the control of weeds in turf and ornamental plants.
Supplier: Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd ABN 87 000 226 022
Address: 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia
Telephone: (03) 9248 6888
Facsimile: (03) 9248 6800
Website: www.bayercropscience.com.au
Contact: Technical Manager (03) 9248 6854
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

May irritate eyes and skin. Not flammable.

Hazard designation: Hazardous according to criteria of Worksafe Australia
Risk phrases: R38 – Irritating to skin.
R48/20/22 – Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
Safety phrases: Not applicable
ADG classification: Not “dangerous goods” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
SUSDP classification: Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L):
Oxadiazon	[19666-30-9]	20
Crystalline silica as quartz	[14808-60-7]	9 to 92
Other ingredients	(non hazardous)	Balance

4. FIRST AID MEASURES

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If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

- Inhalation:** If inhaled, remove to fresh air and keep at rest. Seek medical advice if at all worried.
- Skin contact:** Carefully remove contaminated clothing. Wash affected area with soap and water. Seek medical aid if at all worried.
- Eye contact:** Rinse immediately with clean water for at least 15 minutes and obtain medical aid.
- Ingestion:** Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** The following symptoms may occur:
Local – potential to cause skin and eye irritation.
Systemic – none reported.
- Medical attention:** Treatment:
For local contamination treatment should be symptomatic after decontamination. For systemic poisoning initial treatment should be symptomatic and supportive.

5. FIRE FIGHTING MEASURES

- Extinguishing media:** Product is not combustible. Use extinguishing media suitable for surrounding fire.
- Hazards from combustion products:** In a fire, hydrogen chloride, oxides of nitrogen and oxides of carbon may be formed.
- Precautions for fire fighters:** Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716), as toxic decomposition products may be produced in a fire. If it can be done safely, remove intact containers from the fire. Bund area to prevent contamination of water sources. Dispose of fire control extinguishing agent and spillage later in a safe manner.

6. ACCIDENTAL RELEASE MEASURES

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Avoid contact with the spilled material or contaminated surfaces. Do not smoke, eat or drink during the cleanup process. When dealing with spills wear personal protective clothing and equipment as described in the PERSONAL PROTECTION section above. Prevent contamination of drains, sewers and watercourses. Sweep up or shovel spilled material into properly labelled, sealed drums for safe disposal. Avoid creation of dust. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

7. HANDLING AND STORAGE

- Handling:** Keep out of reach of children. Avoid contact with the eyes. Do not inhale dust.
- Storage:** Store in the closed, original container in a dry, cool, well-ventilated secure area out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards:	<p>The exposure standard assigned by the American Conference of Governmental Industrial Hygienists (ACGIH) for crystalline silica as quartz is:</p> <p>TWA 0.05 mg/m³ - Respirable fraction</p> <p>Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.</p> <p>Bayer recommends an exposure limit of 1 mg/m³ for oxadiazon.</p>
Engineering controls:	<p>Control process conditions to avoid contact. Use local exhaust during formulation and handling. Use only in well ventilated areas.</p>
Personal Protective Equipment:	<p>Eyes: Wear goggles or face shield.</p> <p>Clothing: Wear cotton overalls buttoned to the neck and wrist and a washable hat.</p> <p>Gloves: Wear elbow-length PVC gloves.</p> <p>Respiratory: Wear a mask or respirator if inhalation of dust is possible.</p> <p>Other: 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, goggles or face shield, respirator facepiece and contaminated clothing.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brown granules
Odour:	Aromatic
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point:	Not available
Freezing/melting point:	Not available
Solubility:	Insoluble
Density:	Not available
pH:	Not available
Flash Point:	Not applicable
Flammability (explosive) limits:	Not applicable
Auto-ignition	Not available

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temperature:
Octanol/water log $P_{o/w}$ 4.9
partition
coefficient:
Formulation: Granule

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10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Hazardous polymerisation:	Not available
Conditions to avoid:	Not available
Incompatible materials:	Avoid contact with strong acids, strong bases and strong oxidising agents.
Hazardous decomposition products:	In a fire, hydrogen chloride, oxides of nitrogen and oxides of carbon may be formed.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation:	May irritate respiratory tract.
Skin contact:	May irritate the skin.
Eye contact:	May irritate the eyes.
Ingestion:	Low toxicity if swallowed, but may irritate mucous membranes of mouth and throat.
Other:	None

ANIMAL TOXICITY DATA – PRODUCT: No data available for the product.

ANIMAL TOXICITY DATA – INDIVIDUAL INGREDIENTS:

Acute:

Oral toxicity:	LD ₅₀ rat: > 5000 mg/kg (oxadiazon)
Dermal toxicity:	LD ₅₀ rat/rabbit: > 2000 mg/kg (oxadiazon)
Inhalation toxicity:	LC ₅₀ (4 h) rat: > 2.77 mg/L (oxadiazon)
Skin irritation:	Slightly irritating – rabbit (oxadiazon)
Eye irritation:	Slightly irritating – rabbit (oxadiazon)

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Sensitisation: Not sensitising - guinea pig (oxadiazon)

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Chronic:

This product contains a mineral clay. All mineral clays contain a small amount of crystalline silica as quartz, which is regarded by some agencies as a carcinogen. Prolonged or repeated inhalation of crystalline silica dust may cause silicosis, pulmonary fibrosis or bronchitis. Oxadiazon is not mutagenic, is not a reproductive toxin, and is not expected to cause cancer in humans.

12. ECOLOGICAL INFORMATION

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Dangerous to fish and aquatic organisms. Low toxicity to birds, bees and worms.

Fish toxicity: Oxadiazon:
LC₅₀ (96 h): 1.2 mg/L rainbow trout
LC₅₀ (96 h): 1.2 mg/L bluegill sunfish

Daphnia toxicity: EC₅₀ (48 h): > 2.4 mg/L Daphnia magna

Toxicity to algae: EC₅₀: 6 – 3000 µg/L algae

Bird toxicity: Acute Oral LD₅₀: > 1000 mg/kg mallard duck
Acute Oral LD₅₀: > 2150 mg/kg bobwhite quail

Bee toxicity: Low toxicity to bees

Other:

Environmental fate, persistence and degradation: Not available

13. DISPOSAL CONSIDERATIONS

Shake empty bag into granule applicator. DO NOT dispose of undiluted chemicals on site. Puncture, shred and bury empty containers in a local authority landfill. If no landfill is available bury the empty containers below 500 mm 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. Dispose of waste product via a licensed disposal contractor to an approved landfill.

14. TRANSPORT INFORMATION

UN number: Not applicable

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Proper shipping name: Not applicable

Class and Subsidiary Risk: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Packing Group: Not applicable

EPG: Not applicable

Hazchem code: Not applicable

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

National Registration Authority Approval Number: 46837

16. OTHER INFORMATION

Trademark information: Chipco® and Ronstar® are Registered Trademarks of Bayer

Preparation information: Replaces February 11, 2002 edition.
Reason for update: Conversion to 16 heading format.

Data sources: Bayer CropScience Pty Ltd product safety data and published data

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS