

MATERIAL SAFETY DATA SHEET

Ronstar® Turf and Ornamental Herbicide

Date of Issue: January 22nd, 2008

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Ronstar® Turf and Ornamental Herbicide
Other names: None
Product code: 4207342 (15 kg)
Chemical group: Pyridazinone
Recommended use: Herbicide for the control of weeds in turf and ornamental plants.
Formulation: Granules
Supplier: Bayer Environmental Science – A Business Operation 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.bayeres.com.au
Contact: Technical Manager (03) 9248 6888
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
May cause cancer by inhalation.

Hazard designation: Hazardous according to criteria of Worksafe Australia
Risk phrases: R38 – Irritating to skin
R48/20 – Harmful: danger of serious damage to health by prolonged exposure through inhalation
R49 – May cause cancer by inhalation
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. For transport by sea this product is a Class 9, Marine Pollutant – See Section 14.
SUSDP classification: Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

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

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4. FIRST AID MEASURES

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

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.

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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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Exposure standards:** NOHSC Exposure standard for silica, quartz: TWA: 0.1 mg/m³.
ACGIH TLV TWA for silica, crystalline, quartz – respirable fraction: TWA: 0.025 mg/m³.
- Definitions:**
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.
TLV = Threshold Limit Value
ACGIH = American Conference of Governmental Industrial Hygienists
- Biological limit Values:** Production workers and agricultural workers handling this product regularly should be monitored for the effects of crystalline silica. A baseline level should be established prior to any potential exposure. See Guidelines for Health Surveillance [NOHSC:7039(1995)].
- Engineering controls:** Control process conditions to avoid contact. Use local exhaust during formulation and handling. Use only in well ventilated areas.
- Personal Protective Equipment:**
- Eyes: Wear goggles or face shield.
 - Clothing: Wear cotton overalls buttoned to the neck and wrist and a washable hat.
 - Gloves: Wear elbow-length PVC gloves.
 - Respiratory: Wear a mask or respirator if inhalation of dust is possible.
- 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.

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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 temperature:	Not available
Octanol/water partition coefficient:	log P _{ow} 5.33 (oxadiazon)
Formulation:	Granule

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use. Stable in acidic and neutral medium; unstable in alkali.
Hazardous polymerisation:	Not available
Conditions to avoid:	Extreme of temperature, moisture
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.

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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)
Sensitisation:	Not sensitising - guinea pig (oxadiazon)

Chronic:

Oxadiazon is not mutagenic, is not a reproductive toxin, and is not expected to cause cancer in humans. The carrier in this product contains a small amount of naturally occurring crystalline silica, which is classified as a human carcinogen. Prolonged and/or massive exposure to respirable quartz-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by the deposition in the lungs of fine respirable particles of crystalline silica.

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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: LC ₅₀ (96 h): 1.2 mg/L rainbow trout LC ₅₀ (96 h): 1.2 mg/L bluegill sunfish
Daphnia toxicity:	EC ₅₀ (48 h): > 2.4 mg/L Daphnia magna
Toxicity to algae:	EC ₅₀ : 6 – 3000 µg/L algae
Bird toxicity:	Acute Oral LD ₅₀ : > 1000 mg/kg mallard duck Acute Oral LD ₅₀ : > 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 (road/rail)
Proper shipping name:	Not applicable (road/rail)
Class and Subsidiary Risk:	Not applicable (road/rail)
Packing Group:	Not applicable (road/rail)
EPG:	Not applicable (road/rail)
Hazchem code:	Not applicable (road/rail)
Marine pollutant:	Yes – If this product is shipped by sea it is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (contains oxadiazon), UN 3077, Packing Group III.

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15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 62461

16. OTHER INFORMATION

Trademark information: Ronstar® is a Registered Trademarks of Bayer

Preparation information: First edition.

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