

# Material Safety Data Sheet

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Infosafe No. 3NU1J Issue Date : June 2005 ISSUED by CRPCARE

Product Name : **ORDRAM Herbicide**

Classified as hazardous according to criteria of NOHSC

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

**Product Name** ORDRAM Herbicide  
**Product Code** 0648  
**Product Use** Post-emergence herbicide for the control of grass weeds in rice.  
**Company Name** Crop Care Australasia Pty Ltd (ABN 53 061 362 347)  
**Address** 77 Tingira Street Pinkenba  
Queensland 4008 Australia  
**Emergency Tel.** 1800 033 498  
**Telephone Number/Fax** Tel: (07) 3867 9100 Fax: (07) 3867 9110  
**Product Type** Group E Herbicide  
**Other Information** This MSDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Liquid

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Molinate	2212-67-1	960 g/L
	Proprietary emulsifiers mixture		60 g/L
	Petroleum extract bp:183 - 280C		20 g/L

**Substance Chemical Family** Thiocarbamate

## 3. HAZARDS IDENTIFICATION

Harmful if swallowed.  
Irritating to eyes.

**Other Information** Poisons Schedule 7 DANGEROUS POISON

## 4. FIRST AID MEASURES

**Inhalation** Remove affected person to fresh air until recovered.  
If symptoms develop or persist, seek medical advice.

**Ingestion** Rinse mouth thoroughly with water.  
Give a glass of water.  
If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.  
The above first aid instructions are mandated by the Commonwealth Department of Health and Aged Care via the National Drugs and Poisons Schedule. These instructions are suitable for ingestion of spray solution and small amounts of concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about 30ml) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.

**Skin** If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water.  
Wash affected areas thoroughly with soap and water.  
If irritation persists, seek medical advice.

**Eye** If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.  
Seek medical advice.

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**First Aid Facilities** If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).

**Advice to Doctor** Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Extinguishing Media** Avoid using large volumes of water which would spread the product. Water fog, foam, carbon dioxide or dry chemical.

**Hazardous Combustion Products** Although material is not flammable, the concentrate is combustible. If involved in a major fire, could evolve oxides of nitrogen or sulphur.

**Protective Equipment** Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

## 6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal** Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable. Dispose of at a landfill in accordance with local regulations.

**Environmental Precautions** This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers.

**Clean-up Methods - Large Spillages** Place damaged containers in recovery bins (if available) and return to manufacturer.

## 7. HANDLING AND STORAGE

**Handling** Do NOT spray in high winds.

**Storage** Store in the closed, original container in a dry, well ventilated area out of direct sunlight. Do not store near oxidisers.

**Other Information** Always read the label and any attached leaflet before use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No biological exposure limit allocated. No exposure standard has been established for this product.

**Respiratory Protection** Do not inhale spray mist.

**Eye Protection** Wear chemical goggles.

**Personal Protective Equipment** When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.

**Eng. Controls** Handle in well ventilated areas, generally natural ventilation is adequate.

**Hygiene Measures** After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** Brown liquid.

**Odour** Pungent organic sulphur odour.

**Melting Point** <0°C

**Boiling Point** >150°C

**Solubility in Water** Disperses in water. Not soluble.

**Specific Gravity (H2O=1)** 1.06

**Vapour Pressure** Molinate 5.6\*10<sup>-3</sup> mmHg @ 25°C

**Volatile Component** <4%

**Flash Point** 66°C (CC)

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**Flammability** Combustible liquid C1.

**Ignition Temperature** Not known

**Flammable Limits** Not known

**LEL**

## 10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions.

**Hazardous Polymerization** Hazardous polymerisation is not possible.

**Hazardous Reaction** Keep away from strong oxidising agents.

## 11. TOXICOLOGICAL INFORMATION

**Toxicology Information** No harmful effects are expected if the precautions on the label and this MSDS are followed.

**Inhalation** When applying the product as a spray avoid breathing in spray mists. May cause irritation to mucous membranes. Breathing vapour can result in headaches, dizziness and possible nausea.

**Ingestion** The concentrate is harmful if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. Molinate is rapidly metabolised and excreted, mainly in the urine.

**Skin** May irritate the skin. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.

**Eye** The concentrate will cause irritation of the eyes.

**Chronic Effects** Evidence from animal studies indicate that repeated or prolonged exposure to molinate can result in neuropathy.

**Reproductive Toxicity** Evidence from animal studies suggests the potential for developmental toxicity on repeated or prolonged exposure.

**Carcinogenicity** Molinate has been classified in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans.

**Acute Toxicity - Oral** LD50 (rat) 730 mg/kg for molinate

**Acute Toxicity - Dermal** LD50 (rabbit) >2000 mg/kg for molinate

**Acute Toxicity - Inhalation** LC50 (rat) (4hr) 2.9 mg/l for molinate

**Eye Irritation** The product is an eye irritant.

**Skin Irritation** Mild skin irritant.

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**Other Information** The Australian Acceptable Daily Intake (ADI) for molinate for a human is 0.002 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.2 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, December 2004).

**Other Toxicological information:**

Laboratory testing in animals has shown that exposure to molinate, followed by the ingestion of alcohol causes adverse effects, including a reduction in blood pressure, rapid heart beat and flushing of the skin. Consumption of alcohol during and after using this product should be avoided.

Short-term repeated exposure in rats to molinate (4-45 mg/kg bw/day) resulted in decreased fertility in male rats. This effect was reversible upon cessation of exposure.

Doses of 60-180 mg/kg bw/day of molinate were fed to rats and dogs for 90 days. Effects were noted in the kidneys, testes and ovaries. Molinate was overall negative in a battery of genotoxicity assays.

In a two-year feeding study, male rats receiving 300ppm of molinate per day, showed an increased incidence of kidney tumours. This effect was not seen in female rats or in male or female mice at any dose level.

A developmental study in mice revealed no teratogenic effects.

Embryo/foetotoxic effects were seen only in the presence of maternal toxicity.

## 12. ECOLOGICAL INFORMATION

**Known Harmful Effects on the Environment** Molinate products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.

**Other Precautions** Do not spray on vegetation where honeybees are foraging.  
Do not spray in high winds.  
Do not contaminate dams, waterways or sewers with this product.

**Environ. Protection** Spray drift can cause damage, read the label for more information.

**Persistence / Degradability** Average field half life of molinate is 8 - 25 days.

**Acute Toxicity - Fish** Not toxic to fish.  
The following is data for the active ingredient, molinate.  
LC50 (96 hr) for rainbow trout is 13 mg/l.  
LC50 (96 hr) for bluegill sunfish is 29 mg/l.

## 13. DISPOSAL CONSIDERATIONS

**Product Disposal** On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemCollect).

**Container Disposal** Do not use this container for any other purpose.  
Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations.  
drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.  
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.

## 14. TRANSPORT INFORMATION

It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

**U.N. Number** None Allocated

**Proper Shipping Name** None Allocated

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<b>DG Class</b>	None Allocated
<b>Hazchem Code</b>	None Allocated
<b>Packing Group</b>	None Allocated
<b>Storage and Transport</b>	Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

## 15. REGULATORY INFORMATION

<b>Risk Phrase</b>	R22 Harmful if swallowed. R36 Irritating to eyes.
<b>Safety Phrase</b>	S13 Keep away from food, drink and animal feeding stuffs. S2 Keep out of reach of children. S24/25 Avoid contact with skin and eyes.
<b>Poisons Schedule</b>	S7
<b>Packaging &amp; Labelling</b>	DANGEROUS POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
<b>Hazard Category</b>	Harmful, Irritant
<b>AICS (Australia)</b>	All of the components in this product are listed on the Australian Inventory of Chemical Substances.

## 16. OTHER INFORMATION

<b>Contact Person/Point</b>	Normal Hours: Mr Volker Maier      Phone: (03) 9282 1000 After Hours: Shift Supervisor      Phone: 1800 033 498
<b>References</b>	1. National Drugs and Poisons Schedule Committee, Record of Reasons, June 2004; 2. European Union Directive 67/548/EEC Annex 1 (29th ATP).
<b>Revisions Highlighted</b>	The MSDS was reviewed. Minor changes were made to the information. Product is now a Schedule 7 - Dangerous Poison ...End Of MSDS...