

# Material Safety Data Sheet

Page: 1 of 5

Infosafe No. 3NU4K Issue Date : November 2004 ISSUED by CRPCARE

Product Name : **Zephyr 625 2,4-D Low Odour Herbicide**

Classified as hazardous according to criteria of NOHSC

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

**Product Name** Zephyr 625 2,4-D Low Odour Herbicide  
**Product Code** 0077  
**Product Use** A low odour formulation for the control of broadleaved weeds in fallow before direct drilling or sowing of cereals and pastures; and in cereal crops, pastures, sugar cane, peanuts and non-agricultural areas as per the Directions of Use table on the label.  
**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/Telex Number** Tel: (07) 3867 9100 Fax: (07) 3867 9110  
**Product Type** Group I 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>
	2,4-D present as triethanolamine and diethanolamine salts		625 g/L
	lignosulphonate derivative		0-2 %
	Water		Balance

## 3. HAZARDS IDENTIFICATION

Harmful by inhalation, in contact with skin and if swallowed.

**Other Information** Poisons Schedule 5

## 4. FIRST AID MEASURES

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

**Ingestion** 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 one tablespoon for an adult person) 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** Remove contaminated clothing and launder before re-use.  
Wash affected areas thoroughly with soap and water.

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

# Material Safety Data Sheet

Page: 2 of 5

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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.  
No specific antidote.

## 5. FIRE FIGHTING MEASURES

**Extinguishing Media** If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.  
None required but use water spray to cool containers or personnel threatened by fire.

**Hazardous Combustion Products** May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.

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

**Other Information** Hazchem code has not been assigned.  
Prevent fire water from entering drains or water bodies.

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal Protection** For appropriate personal protective equipment (PPE), refer Section 8.

**Environmental Precautions** This product is a herbicide and spills can damage crops, pastures and desirable vegetation.  
Prevent from entering drains, waterways or sewers.  
Use earthen bunds or absorbent bunding to prevent spreading of spillage.

**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.  
Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers.  
No special precautions are necessary when handling sealed containers.  
For personal protective equipment (PPE) and hygiene advice, refer Section 8.

**Storage** Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight.  
Do not store near oxidisers.  
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

**Other Information** Equipment that has been used for this chemical should not be used for the application of other materials to sensitive plants, unless it has been well washed out with hot soapy water or 1% solution of ammonia, followed by several clear water rinses.  
Do not use on or in situations where damage to susceptible crops or plants such as cotton, tobacco, tomatoes, flowers, vines, fruit trees or other susceptible crop plants may result from direct application or drift.  
Always read the label and any attached leaflet before use.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**Exposure Limits** No exposure standard for this product has been set, however, an exposure standard has been set for 2,4-D at 10 mg/m<sup>3</sup>.

# Material Safety Data Sheet

Page: 3 of 5

Infosafe No. 3NU4K Issue Date : November 2004 ISSUED by CRPCARE

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

**Personal Protective Equipment** When preparing spray, wear PVC or rubber apron, elbow length PVC gloves and face shield.

When using the prepared spray, wear face shield.

**Eng. Controls** Natural ventilation is sufficient when handling concentrate and preparing spray solution.

**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** Dark brown liquid.

**Melting Point** <0°C

**Solubility in Water** Soluble in water.

**Boiling Point** >100°C (for water)

**Specific Gravity (H<sub>2</sub>O=1)** 1.293

**Vapour Pressure** 2,4-D amine salts are non volatile.

**Volatile Component** 25%

**Flash Point** Non flammable

**Ignition Temperature** N/A

**Explosion Properties** N/A

## 10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions.

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

**Materials to Avoid** Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-D and largely de-activate the product and cause blockages in spray equipment.

**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** The components of the product are of low volatility and no adverse effects are expected from handling the concentrate.

The concentrate is considered harmful by inhalation by Worksafe Australia.

A moderate hazard exists from inhalation of spray and care should be taken to avoid inhalation of spray mists.

**Ingestion** Not a likely route of exposure.  
Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.

However, swallowing of large amounts may cause injury.

Ingestion of the product in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.

**Skin** Prolonged contact with the concentrate may cause irritation.

Prolonged contact of the concentrate with skin will result in absorption of some 2,4-D which can be harmful.

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

Prolonged contact with the concentrate may cause damage to the eye.

# Material Safety Data Sheet

Page: 4 of 5

Infosafe No. 3NU4K Issue Date: November 2004 ISSUED by CRPCARE

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**Chronic Effects** Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.

**Carcinogenicity** The weight of the evidence is that 2,4-D is not carcinogenic.

**Acute Toxicity - Oral** LD50 (rat) 639 - 764 mg/kg for 2,4-dichlorophenoxyacetic acid  
LD50 (rat) 949 mg/kg for a similar 2,4-D salt

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

**Acute Toxicity - Inhalation** LC50 (rat) (4hr) 3.5 mg/l for a similar 2,4-D salt

**Skin Irritation** Not a skin irritant.

**Skin Sensitisation** Product is not a skin sensitiser.

**Other Information** The Australian Acceptable Daily Intake (ADI) for 2,4-D for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.0 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, June 2004).  
In trials using 2,4-D as a drug, studies on volunteers have shown that doses of between 5 and 36 mg/kg body weight do not cause any acute toxic effects. Formulated 2,4-D products can be absorbed by ingestion, inhalation (spray mist) and through the skin. Studies of users (sprayers) has shown that absorption through the skin is the most common route. When used with good agricultural spraying practice and good personal hygiene, absorption of 2,4-D is very low.

## 12. ECOLOGICAL INFORMATION

**Known Harmful Effects on the Environment** 2,4-D products do not appear to pose any threat to birds.  
2,4-D products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.

**Mobility** Rapid degradation in soil presents significant downward movement under normal conditions.

**Persistence / Degradability** Half life in soil is typically 7 days.  
Loss from soil is principally by microbial degradation.

**Acute Toxicity - Fish** Not toxic to fish.  
LC50 (96 hr) for rainbow trout is 100 mg/l for 2,4-D dimethylamine salt

**Acute Toxicity - Daphnia** LC50 (48 hr) for 2,4-D is >100 mg/l.

**Acute Toxicity - Other Organisms** Birds: Not toxic to birds. LD50 for bobwhite quail is >500 mg/kg  
Bees: Not toxic to bees. LD50 94 µg/bee.

**Sewage Treatment** Not inhibitory in sewage system, 2,4-D is rapidly biodegraded.

## 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).

# Material Safety Data Sheet

Page: 5 of 5

Infosafe No. 3NU4K Issue Date : November 2004 ISSUED by CRPCARE

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**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.  
Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.  
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  
**DG Class** None Allocated  
**Hazchem Code** None Allocated  
**Packing Group** None Allocated  
**Storage and Transport** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.  
**IMDG UN No** Not a marine pollutant.

## 15. REGULATORY INFORMATION

**Risk Phrase** R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
**Safety Phrase** S13 Keep away from food, drink and animal feeding stuffs.  
S2 Keep out of reach of children.  
**Poisons Schedule** S5  
**Hazard Category** Harmful  
**Packaging & Labelling** CAUTION  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING  
**AICS (Australia)** All of the components in this product are listed on the Australian Inventory of Chemical Substances.

## 16. OTHER INFORMATION

**Contact Person/Point** Normal Hours: Mr Volker Maier Phone: (03) 9282 1000  
After Hours: Shift Supervisor Phone: 1800 033 498  
**Revisions Highlighted** First Issue  
...End Of MSDS...