



Material Safety Data Sheet

infosafe
CS: 1.6.22

Page: 1 of 5

Infosafe No™ 3NU4K Issue Date : September 2012 ISSUED by CRPCARE

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

Classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name Zephyr 625 2,4-D Low Odour Herbicide
Product Code 0077
Product Type Group I Herbicide
Company Name Crop Care Australasia Pty Ltd (ABN 53 061 362 347)
Address Unit 15/16 Metroplex Avenue Murarrie
Queensland 4172 Australia
Emergency Tel. 1800 033 498 (24hr Australia)
Telephone/Fax Number Tel: +61 7 3909 2000
Fax: +61 7 3909 2010
Recommended 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 for Use table on the label.
Other Information This is a PHENOXY Herbicide that can cause severe damage to susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals. 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. HAZARDS IDENTIFICATION

Hazard Classification Classified as hazardous
HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.
Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.
Risk Phrase(s) Classified as hazardous
R22 Harmful if swallowed.
R41 Risk of serious damage to eyes.
R43 May cause sensitization by skin contact.
Safety Phrase(s) S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.
Other Information Poisons Schedule S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Ingredients	Name	CAS	Proportion
	2,4-D present as triethanolamine and diethanolamine salts		625 g/L
	lignosulphonate derivative		0-2 %
	Water		Balance

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

Infosafe No™ 3NU4K	Issue Date : September 2012	ISSUED by CRPCARE
--------------------	-----------------------------	-------------------

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placement of the patient.
The above first aid instructions are mandated by the Commonwealth Department of Health and Ageing 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 immediately if irritation develops or persists.

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

Advice to Doctor Treat symptomatically.
No specific antidote.

5. FIRE FIGHTING MEASURES

Suitable 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.

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

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

Other Information STOP 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.

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

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.

7. HANDLING AND STORAGE

Precautions for Safe 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.

Conditions for Safe 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

Infosafe No™ 3NU4K	Issue Date : September 2012	ISSUED by CRPCARE
--------------------	-----------------------------	-------------------

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

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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

National Exposure Standards	No exposure standard for this product has been set, however, an exposure standard has been set for 2,4-D at 10 mg/m3.
Engineering Controls	Natural ventilation is sufficient when handling concentrate and preparing spray solution.
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.
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.
Requirements Concerning Special Training	Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Appearance	Dark brown liquid.
Melting Point	<0°C
Boiling Point	>100°C (for water)
Solubility in Water	Soluble in water.
Specific Gravity	1.293
Vapour Pressure	2,4-D amine salts are non volatile.
Volatile Component	25%
Flash Point	Non flammable
Auto-Ignition Temperature	N/A
Explosion Properties	N/A

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Incompatible Materials	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 Reactions	Keep away from strong oxidising agents.
Hazardous Polymerization	Hazardous polymerisation is not possible.

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.

Infosafe No™ 3NU4K	Issue Date : September 2012	ISSUED by CRPCARE
--------------------	-----------------------------	-------------------

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

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Skin	Ingestion of the product in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination. Prolonged contact with the concentrate may cause irritation.
Eye	Prolonged contact of the concentrate with skin will result in absorption of some 2,4-D which can be harmful. The concentrate will cause severe irritation and possible damage unless washed off immediately.
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) 699 mg/kg for 2,4-dichlorophenoxyacetic acid LD50 (rat) 710 mg/kg for diethanolamine
Acute Toxicity - Dermal	LD50 (rabbit) >2000 mg/kg
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >1.79 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 Office of Chemical Safety and Environmental Health, 'ADI List', December 2011). 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

Persistence / Degradability	Half life in soil is typically 7 days. Loss from soil is principally by microbial degradation.
Mobility	Rapid degradation in soil prevents significant downward movement under normal conditions.
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.
Environ. Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	Not toxic to fish. LC50 (96hr) for rainbow trout is 100 mg/l for 2,4-D dimethylamine salt
Acute Toxicity - Daphnia	LC50 (48hr) 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 (ChemClear®).
Container Disposal	Do not use this container for any other purpose. Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal

Infosafe No™ 3NU4K	Issue Date : September 2012	ISSUED by CRPCARE
--------------------	-----------------------------	-------------------

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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.

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.

14. TRANSPORT INFORMATION

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
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

Poisons Schedule	S6
Packaging & Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category	Harmful, Irritant
Other Information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 58990.

16. OTHER INFORMATION

Date of preparation or last revision of MSDS	Revised 03/09/2012 This SDS replaces document dated November 2009.
Contact Person/Point	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted	The SDS was reviewed. Various changes were made to the information. Product is now an S6 Scheduled Poison. Other minor changes made to sections 1, 11, 13 and 15. ...End Of MSDS...

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