

Infosafe No™ 3NV10	Issue Date : July 2017	ISSUED by NUFARM
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 Product Name **Zephyr 625 2,4-D Low Odour Herbicide**

Classified as hazardous

1. Identification

GHS Product Identifier	Zephyr 625 2,4-D Low Odour Herbicide
Product Code	0077
Product Type	Group I Herbicide
Company Name	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address	103-105 Pipe Road Laverton North Victoria 3026 Australia
Telephone/Fax Number	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001
Emergency phone number	1800 033 498 (24hr Australia)
Recommended use of the chemical and restrictions on 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. This is a PHENOXY Herbicide that can cause severe damage to susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.
Other Information	This Safety Data Sheet describes the properties of the concentrated product. The physical properties and the assessments may not apply to the properties of the product once it has been diluted for application.

2. Hazard Identification

GHS classification of the substance/mixture	ED1 Eye Damage/Irritation: Category 1 OT4 Acute Toxicity - Oral: Category 4 SS-1 Sensitization - Skin: Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H318 Causes serious eye damage. H302 Harmful if swallowed. H317 May cause an allergic skin reaction.
General Precautionary Statement (s)	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
Pictogram (s)	Corrosion, Exclamation mark, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention	P280 Wear protective gloves, clothing, eye and face protection. P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P261 Avoid breathing spray.
Precautionary statement – Response	P272 Contaminated work clothing should not be allowed out of the workplace. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P363 Wash contaminated clothing before reuse.
Other Information	Poisons Schedule S6

3. Composition/information on ingredients

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Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	2,4-D present as triethanolamine and diethanolamine salts		625 g/L
	lignosulphonate derivative		<1%
	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 placement of the patient.
Skin	Remove contaminated clothing and launder before re-use. Wash affected areas thoroughly with soap and water.
Eye contact	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.
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Conditions for safe storage, including any incompatibilities	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

Occupational exposure limit values	No exposure standard for this product has been set, however, an exposure standard has been set for 2,4-D at 10 mg/m ³ .
Appropriate 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
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.
Possibility of hazardous reactions	Keep away from strong oxidising agents.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. Toxicological Information

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Toxicology Information	No harmful effects are expected if the precautions on the label and this MSDS are followed.
Acute Toxicity - Oral	LD50 (rat) 699 mg/kg for 2,4-dichlorophenoxyacetic acid
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
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.
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.
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 severe irritation and possible damage unless washed off immediately.
Skin Sensitisation	May cause an allergic skin reaction.
Carcinogenicity	The weight of the evidence is that 2,4-D is not carcinogenic.
Chronic Effects	Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.
Skin corrosion/irritation	Not a skin irritant.
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, 'ADI List', March 2016).

12. Ecological information

Persistence and 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.
Environmental 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®).
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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 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

Regulatory Information Australia: WHS regulations (2011) - Schedule 11: classification not listed.
Poisons Schedule S6
Packaging & Labelling POISON
 KEEP OUT OF REACH OF CHILDREN
 READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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 SDS 12/07/2017
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. Minor changes were made to the information and product has been rebranded.
 ...End Of MSDS...

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