

Infosafe No™ 3NU9B	Issue Date : January 2016	ISSUED by NUFARM
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 Product Name **ESTERCIDE 800 Herbicide**

Classified as hazardous

1. Identification

GHS Product Identifier	ESTERCIDE 800 Herbicide
Product Code	0400 NUL 2515
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	For the control of broadleaved weeds in wheat and barley, and in fallow situations before direct drilling or sowing of cereals, grain legumes, canola and pastures in WA only 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. Avoid spray drift onto any non-target vegetation.
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	CA2 Carcinogenicity: Category 2 AH1 Aspiration Hazard: Category 1 OT4 Acute Toxicity - Oral: Category 4 SS-1 Sensitization - Skin: Category 1 ED2A Eye Damage/Irritation: Category 2A AC1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 FL3 Flammable Liquids: Category 3
Signal Word (s)	DANGER
Hazard Statement (s)	H351 Suspected of causing cancer. H304 May be fatal if swallowed and enters airways. AUH066 Repeated exposure may cause skin dryness or cracking H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H410 Very toxic to aquatic life with long lasting effects. H226 Flammable liquid and vapour. 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.
General Precautionary Statement (s)	Health hazard, Exclamation mark, Environment, Flame,
Pictogram (s)	The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention	P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe vapours or spray. P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, clothing, eye and face protection.
Precautionary statement – Response	P308+P313 IF exposed or concerned: Get medical advice/attention. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth.

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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.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 Poisons Schedule S6

Other Information

3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	2,4-D (present as the ethyl ester)	94-75-7	800 g/L
	Liquid Hydrocarbons	64742-94-5	10-30 %
	Other ingredients (non-hazardous)		10-30 %

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.
First Aid Facilities	If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
Advice to Doctor	Treat symptomatically. If vomiting occurs, solvent present may cause pulmonary pneumonitis.

5. Fire-fighting measures

Suitable extinguishing media	Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	Although material is not flammable, the concentrate is combustible. 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 spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable.
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. If large liquid spills occur, attempt to recover as much spilt material from sumps and banded areas, as possible, before absorbing remaining material into vermiculite or other absorbent.
Environmental Precautions	This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers.

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7. Handling and storage

Precautions for Safe Handling	Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers.
Conditions for safe storage, including any incompatibilities	Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.
Other Information	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 . The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m ³ ; 17ppm TWA, as total hydrocarbon.
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate. Local exhaust ventilation may be required in confined spaces.
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.
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	Clear brown liquid
Odour	Typical solvent odour
Boiling Point	296°C (2,4-D ethyl ester); 179 - 219°C (solvent)
Solubility in Water	Disperses in water.
Specific Gravity	1.219
Vapour Pressure	145 mPa @ 20°C for 2,4-D ethyl ester; 83 mPa @ 20°C for solvent.
Vapour Density (Air=1)	>1
Partition Coefficient: n-octanol/water	Kow Log P is 3.2 (pH 1-10)
Flash Point	47°C; firepoint 122°C.
Flammability	GHS: Flammable Liquid. GHS category 3. AS1940: Combustible liquid C1 (does not sustain combustion). ADG7: Not a flammable liquid (does not sustain combustion).
Auto-Ignition Temperature	>400°C for solvent
Flammable Limits - Lower	0.6% for solvent
Flammable Limits - Upper	7.0% for solvent

10. Stability and reactivity

Chemical Stability	Stable under normal conditions.
Possibility of hazardous reactions	Keep away from strong oxidising agents, may react violently.
Hazardous Polymerization	Hazardous polymerisation is not possible.

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11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) 720 - 982 mg/kg for a similar 2,4-D formulation
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for a similar 2,4-D formulation
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >5.4 mg/l for a similar 2,4-D formulation
Ingestion	Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
Inhalation	When applying the product as a spray avoid breathing in spray mist. High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, and may have other central nervous system effects.
Skin	Prolonged contact with the concentrate may result in absorption of 2,4-D in harmful amounts. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. Prolonged or repeated exposure may cause skin sensitisation.
Eye	May irritate the eyes.
Skin Sensitisation	Prolonged and repeated skin contact may result in skin sensitisation.
Carcinogenicity	An impurity present in the solvent has been found to cause tumors in laboratory studies. The active ingredient(s), 2,4-D is not considered carcinogenic.
Reproductive Toxicity	Data indicates no reproductive effects. Data indicates no teratogenic effects.
Chronic Effects	Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.
Serious eye damage/irritation	Not an eye irritant.
Mutagenicity	The weight of evidence indicates that 2,4-D does not present a mutagenic risk.
Skin corrosion/irritation	Mild 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 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: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', December 2014).

12. Ecological information

Known Harmful Effects on the Environment	2,4-D ethyl ester hydrolyses rapidly in natural waters. 2,4-D acid is readily biodegradable.
Environmental Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	LC50 (96hr) for zebra fish is 2.7 mg/l for the formulated product
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia magna is 5.1 mg/l for the formulated product.
Acute Toxicity - Algae	EC50 (48hr) for algae 7.3 mg/l for the formulated product.
Acute Toxicity - Other Organisms	Moderately toxic to birds. Not toxic to bees.

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 containers before disposal. Add

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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.

Returnable containers: empty contents fully into application equipment.

Replace cap, close all valves and return to the point of supply for refill or storage.

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.

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.

15. Regulatory information

Regulatory Information WHS Schedule 11: item 8 - Flammable Liquid category 3.

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: 31209.

16. Other Information

Date of preparation or last revision of SDS Revised 23/12/2015
This MSDS replaces document dated September 2015.

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.
Regulatory Information updated with WHS Schedule information.
...End Of MSDS...

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