



# Material Safety Data Sheet

Page: 1 of 5

Infosafe No. 3NU9B Issue Date : June 2007 ISSUED by NUFARM

Product Name : **ESTERCIDE 800 Herbicide**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** ESTERCIDE 800 Herbicide  
**Product Code** 0400  
**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  
**Emergency Tel.** 1800 033 498 (24hr Australia)  
**Telephone/Fax Number** Tel: +61 3 9282-1000  
Fax: +61 3 9282-1001  
**Recommended Use** For the control of broadleaved weeds before direct drilling or sowing of cereals and pastures; and in cereal crops (not oats), pastures, sugar cane and non-agricultural areas as per the Directions for Use table on the label.  
**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. HAZARDS IDENTIFICATION

**Hazard Classification** 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)** R22 Harmful if swallowed.  
R43 May cause sensitization by skin contact.  
R65 Harmful: may cause lung damage if swallowed.  
**Safety Phrase(s)** S13 Keep away from food, drink and animal feeding stuffs.  
S2 Keep out of reach of children.  
S24 Avoid contact with skin.  
S37 Wear suitable gloves.  
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.  
**Other Information** Poisons Schedule S5

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Liquid

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



# Material Safety Data Sheet

Page: 2 of 5

Infosafe No. 3NU9B Issue Date : June 2007 ISSUED by NUFARM

Product Name : **ESTERCIDE 800 Herbicide**

swallowed (more than about one tablespoon) 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 laundry 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.

**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.

## 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 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.

## 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** 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

**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/m<sup>3</sup>.  
The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m<sup>3</sup>; 17ppm TWA, as total hydrocarbon.

**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,



# Material Safety Data Sheet

Page: 3 of 5

Infosafe No. 3NU9B Issue Date : June 2007 ISSUED by NUFARM

Product Name : **ESTERCIDE 800 Herbicide**

**Requirements Concerning Special Training** elbow-length PVC gloves and goggles.  
NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials. By 1st September, 2005 all users must have received such training.

## 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  
**Octanol/Water Partition Coefficient** Kow Log P is 3.2 (pH 1-10)  
**Flash Point** 47°C; firepoint 122°C.  
**Flammability** Combustible liquid C1 as firepoint >100°C  
**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.  
**Hazardous Reactions** Keep away from strong oxidising agents, may react violently.  
**Hazardous Polymerization** Hazardous polymerisation is not possible.

## 11. TOXICOLOGICAL INFORMATION

**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.  
**Ingestion** Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.  
**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.  
**Chronic Effects** Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.  
**Reproductive Toxicity** Data indicates no reproductive effects. Data indicates no teratogenic effects.  
**Mutagenicity** The weight of evidence indicates that 2,4-D does not present a mutagenic risk.  
**Carcinogenicity** The weight of the evidence is that 2,4-D is not carcinogenic.  
**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



# Material Safety Data Sheet

Page: 4 of 5

Infosafe No. 3NU9B Issue Date : June 2007 ISSUED by NUFARM

Product Name : **ESTERCIDE 800 Herbicide**

**Acute Toxicity - Inhalation** LC50 (rat) (4hr) >5.4 mg/l for a similar 2,4-D formulation

**Eye Irritation** Not an eye irritant.

**Skin Irritation** Mild skin irritant.

**Skin Sensitisation** Prolonged and repeated skin contact may result in skin sensitisation.

**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: Comm. Dept. of Health and Ageing, 'ADI List', TGA, September 2006).

## 12. ECOLOGICAL INFORMATION

**Known Harmful Effects on the Environment** The product is a marine pollutant for sea transport.

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

**Acute Toxicity - Fish** LC50 (96 hr) for carp is 1 mg/l for 2,4-D ethyl ester

**Acute Toxicity - Daphnia** EC50 (3hr) for daphnia pulex is >10 mg/l.

**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 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. 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.

## 14. TRANSPORT INFORMATION

**Storage and Transport** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**UN Number (Sea Transport)** 3082

**IMO Class/Packing Group** Class 9; Packing Group III

**IMO Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains 2,4-D Ethyl Ester)

## 15. REGULATORY INFORMATION

**Poisons Schedule** S5



# Material Safety Data Sheet

Page: 5 of 5

Infosafe No.	3NU9B	Issue Date : June 2007	ISSUED by NUFARM
--------------	-------	------------------------	------------------

Product Name : **ESTERCIDE 800 Herbicide**

---

<b>Packaging &amp; Labelling</b>	CAUTION 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: +61 3 9282 1000
	After Hours: Shift Supervisor	Phone: 1800 033 498
<b>Revisions</b>	The MSDS was reviewed. Minor changes were made to the information.	
<b>Highlighted</b>	See flashpoint and flammability information, section 9.	
	...End Of MSDS...	