

NUFARM 2,4-D ESTER 680 HERBICIDE

Infosafe No.: 3NUE4
ISSUED Date : 18/03/2024
ISSUED by: NUFARM AUSTRALIA LIMITED.

Section 1 - Identification

Product Identifier

NUFARM 2,4-D ESTER 680 HERBICIDE

Product Code

0476

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

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Emergency Phone Number

1800 033 498 (24hr Australia)

Emergency Contact Name

www.nufarm.com.au

E-mail Address

SDSANZ@nufarm.com

Recommended use of the chemical and restrictions on use

A specially formulated low volatile herbicide for selective control of various weeds in crops, pastures and non-agricultural areas as per the Directions for Use table on the label.

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.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Complies with the requirements of Special Provision AU01 and therefore exempted from being classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Classified as Dangerous Goods according to International Maritime Dangerous Goods Code (IMDG) and International Air Transport Association (IATA).

Acute toxicity: Category 4 - Oral

Eye damage/irritation: Category 2A

Sensitisation - skin: Category 1

Hazardous to the Aquatic Environment - Acute Hazard: Category 1

Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

Signal Word (s)

WARNING

Hazard Statement (s)

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.

Pictogram (s)

Exclamation mark, Environment



Precautionary Statement–Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash 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.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement–Response

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
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.
P391 Collect spillage.

Precautionary Statement–Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

Section 3 - Composition and Information on Ingredients

Ingredients

| Name | CAS | Proportion |
|--|------------|------------|
| 2,4-D present as the 2-ethyl hexyl ester | 1928-43-4 | 680 g/L |
| Benzenesulfonic acid, dodecyl-, calcium salt | 26264-06-2 | <5 % |
| Ingredients determined not to be hazardous | | Balance |

Section 4 - First Aid Measures

Inhalation

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin

Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

Eye

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including hydrogen chloride, phosgene, carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific hazards arising from the chemical

Although material is not flammable, the concentrate is combustible.

Special Protective Equipment and Precautions for Firefighters

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

Hazchem Code

•3Z

Decomposition Temperature

Not available

Section 6 - Accidental Release Measures

Emergency Procedures

Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

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 bunded 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.

Section 7 - Handling and Storage

Precautions for Safe Handling

Avoid inhalation of vapours and mists, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Do not use near ignition sources. Do not pressurise, cut, heat or weld containers as they may contain hazardous residues. Maintain high standards of personal hygiene by washing hands prior to eating, drinking, smoking or using toilet facilities. 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.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area away from sources of ignition, foodstuffs, clothing and incompatible materials such as oxidising agents. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations. For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids.

Storage Regulations

Classified as a Class C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS1940 2017.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values

No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:

2,4-D

TWA: 10 mg/m³

Note: Sen

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

'Sen'Notice: The substance may cause sensitization by skin contact or by inhalation.

Source: Safe Work Australia

Biological Monitoring

No biological limits allocated.

Control Banding

Not available

Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye and Face Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material such as PVC. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Thermal Hazards

No further relevant information available.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Section 9 - Physical and Chemical Properties

| Properties | Description | Properties | Description |
|--|----------------------------------|---------------------------------|---------------------------|
| Form | Liquid | Appearance | Clear brown liquid |
| Colour | Brown | Odour | Not available |
| Melting Point | -5 °C | Boiling Point | >200 °C (2,4-D 2EHE) |
| Decomposition Temperature | Not available | Solubility in Water | Disperses |
| Specific Gravity | 1.14 | pH | 3 - 4 |
| Vapour Pressure | 0.48 mPa @ 25 °C for 2,4-D 2EHE | Relative Vapour Density (Air=1) | Not available |
| Evaporation Rate | Not available | Odour Threshold | Not available |
| Viscosity | Not available | Volatile Component | Not available |
| Partition Coefficient: n-octanol/water (log value) | Kow Log P is 5.78 for 2,4-D 2EHE | Flash Point | 130 °C, firepoint 220 °C. |
| Flammability | Not flammable | Auto-Ignition Temperature | Not available |
| Explosion Limit - Upper | Not available | Explosion Limit - Lower | Not available |
| Explosion Properties | Not available | Oxidising Properties | Not available |
| Particle Characteristics | Not available | | |

Section 10 - Stability and Reactivity

Reactivity

Reacts with incompatible materials.

Chemical Stability

Stable under normal conditions of storage and handling.

Possibility of hazardous reactions

Reacts with incompatible materials.

Conditions to Avoid

Heat, open flames and other sources of ignition.

Incompatible Materials

Strong oxidising agents.

Hazardous Decomposition Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including hydrogen chloride, phosgene, carbon monoxide, carbon dioxide and oxides of nitrogen.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Toxicology Information

No toxicity data available for this material. The available acute toxicity data for the ingredient/s is/are given below.

Acute Toxicity - Oral

2,4-D 2-ethylhexyl ester

LD50 (rat): 720 - 982 mg/kg

Acute Toxicity - Dermal

2,4-D 2-ethylhexyl ester

LD50 (rat): >2000 mg/kg

Acute Toxicity - Inhalation

2,4-D 2-ethylhexyl ester
LC50 (rat): >5.4 mg/l/4h

Ingestion

Harmful if swallowed. Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation

Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Skin

May cause an allergic skin reaction. May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye

Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

Respiratory Sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

May cause an allergic skin reaction.

Germ Cell Mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

2,4-D is listed as a Group 2B: Possibly carcinogenic to humans according to International Agency for Research on Cancer (IARC).

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT - Single Exposure

Not expected to cause toxicity to a specific target organ.

STOT - Repeated Exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

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: Australian Pesticides and Veterinary Medicines Authority (APVMA) December 2023.

Section 12 - Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

No ecological data available for this material. The available ecological data for the ingredients is given below:

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

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

Do not discharge this material into waterways, drains and sewers.

Acute Toxicity - Fish

2,4-D 2-ethylhexyl ester
LC50 (bluegill sunfish): 20 mg/l/96h
LC50 (inland silverside): >0.24 mg/l/96h

Acute Toxicity - Daphnia

2,4-D 2-ethylhexyl ester
EC50 (daphnia magna): 5.2 mg/l/48h

Acute Toxicity - Algae

2,4-D 2-ethylhexyl ester
EC50 (Selenastrum capricornutum): >30 mg/l/120h

Acute Toxicity - Other Organisms

Birds: Not toxic to birds. LD50 for mallard ducks is 663 mg/kg
Bees: Not toxic to bees. LD50 >100 µg/bee.

Hazardous to the Ozone Layer

This product is not expected to deplete the ozone layer.

Section 13 - Disposal Considerations

Disposal Considerations

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations. To minimise personal exposure, refer to Section 8 - Exposure Controls and Personal Protection.

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 and Methods

Do not use this container for any other purpose.

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.

If recycling, replace cap and return clean containers to recycler or designated collection point.

Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank.

Section 14 - Transport Information

Transport Information

Road and Rail Transport (ADG Code):

This product complies with the requirements of Special Provision AU01 and is therefore exempted from being classified as Dangerous Goods according to the ADG Code.

Note: Special Provision AU01:

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Class/Division: 9

UN No: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 2,4-D 2-ethylhexyl ester) (Marine Pollutant)

Packing Group: III

EMS: F-A, S-F

Special Provisions: 274, 335, 969

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 9

UN No: 3082

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.(Contains 2,4-D 2-ethylhexyl ester)

Packing Group: III

Label: Miscellaneous

Packaging Instructions (passenger & cargo): 964

Packaging Instructions (cargo only): 964

Special provisions: A97, A158, A197, A215

UN Number

None Allocated

Proper Shipping Name

None Allocated

Transport Hazard Class

None Allocated

Hazchem Code

•3Z

Special Precautions for User

Not available

IMDG Marine pollutant

Yes

Transport in Bulk

For bulk shipments as Class 9, use UN 3082, HazChem code•3Z.

Section 15 - Regulatory Information

Regulatory Information

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Australia: WHS regulations (2011) - Schedule 11: classification not listed.

Poisons Schedule

S6

Montreal Protocol

Not listed

Stockholm Convention

Not listed

Rotterdam Convention

Not listed

International Convention for the Prevention of Pollution from Ships (MARPOL)

Not available

Agricultural and Veterinary Chemicals Act 1994

APVMA product number: 60938.

This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Basel Convention

Not listed

Section 16 - Any Other Relevant Information

Date of Preparation

SDS Reviewed: March 2024

Supersedes: November 2021

Version Number

4.0

Literature References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Code of Practice for Supply Diversion into Illicit Drug Manufacture.

National Code of Practice for Chemicals of Security Concern.

Agricultural Compounds and Veterinary Chemicals Act.

International Agency for Research on Cancer (IARC) Monographs.

Montreal Protocol on Substances that Deplete the Ozone Layer.

Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

International Air Transport Association (IATA) Dangerous Goods Regulations.

International Maritime Dangerous Goods (IMDG) Code.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition).

Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

Contact Person/Point

Normal hours: SDS coordinator : Phone +61 3 9282 1000

After hours: Shift supervisor : Phone 1800 033 498

User Codes

| User Title Label | User Codes |
|------------------|------------|
| Field 4 | Y |

END OF SDS

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