



MSDS OF NAADCO 2,4-D AMINE 625 HERBICIDE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	NAADCO 2,4-D AMINE 625 SL HERBICIDE
Supplier	New Australia Agricultural Development Company Pty Limited
Address	Rear 150-154 Parramatta Rd, Auburn, NSW, 2144
Telephone	+61 2 94983675, 0430990521
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2. HAZARDS IDENTIFICATION

Hazard classification:	Hazardous according to the criteria of NOHSC. Non-dangerous goods.
Risk phrases:	R22 Harmful if swallowed. R25 Toxic if swallowed. R36 Irritating to eyes. R38 Irritating to skin.
Safety phrases:	S1/2 Keep locked up and out of the reach of children. S3/9/49 Keep only in the original container in a cool, well-ventilated place. S13 Keep away from food, drink and animal feeding stuffs. S20/21 When using do not eat or drink/smoke. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S23 Do not breathe spray. S24/25 Avoid contact with skin/eyes. S29/35 Do not empty into drains/Dispose of material and container in a safe way.
SUSDP Classification:	S5.
ADG Classification:	Not a dangerous good.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration
2,4-D present as the dimethylamine and diethanolamine salts	2008-39-1 5742-19-8	625g/L
Other ingredients (including water) determined not to be hazardous		Balance

4. FIRST AID MEASURES

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand)



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and is available at all times. Have this SDS with you when you call.

- Skin Contact:** Remove contaminated clothing. Wash contaminated skin with soapy water. If skin irritation develops, get medical attention. Wash clothing thoroughly before re-use.
- Eye Contact:** Rinse eye(s) with clean running water for 15 mins. Get medical attention.
- Ingestion:** Rinse mouth. Give water to drink if patient is conscious. DO NOT induce vomiting. If vomiting occurs ensure patient can breathe, then give water to drink. Get medical attention.

5. FIRE FIGHTING MEASURES

Product is not flammable. Some components will burn after heating to dryness. Treat fire as appropriate to other flammables present.

Extinguishing media: Carbon dioxide, dry chemical, foam, water fog.

Special hazards in fire: Combustion may release carbon dioxide, and/or chlorine compounds.

Required special protective equipment for fire-fighters: Wear self contained breathing apparatus if in enclosed space.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures: Wear protective equipment to prevent skin and eyes being affected. Evacuate unprotected and unnecessary personnel from area of spill.

If material is leaking from a container, stop the leak only if this can be done safely.
Prevent spillage entering drains or watercourse.

Methods for containment

- & clean-up:** Vermiculite, Sand, Soil is a suitable absorbent, especially soils high in clay.
Soil can be used to form bunds to contain spillage.
Contaminated soil should be collected for disposal at a suitable landfill.
Contaminated area and tools should be washed down with hypochlorite bleach.
Personal protective equipment and clothing should be washed with soapy water.

7. HANDLING AND STORAGE

- Handling:** Keep away from food, drink, and animal feedstuff.
KEEP OUT OF REACH OF CHILDREN.
Wear suitable Personal protective equipment when handling and spraying.
- Storage:** Store in the original container in a dry, cool, ventilated, LOCKED area.
DO NOT store in prolonged sunlight.
DO NOT store with food, seed, or animal feedstuff.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure

- standards:** None set for 2,4-D. The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life is



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set at 10 mg/m³.

Biological limit values: None set for 2,4-D.

Engineering measures: Use assisted ventilation in enclosed spaces if needed, especially storage areas.

Personal Protective Equipment (PPE):

General: When opening the container and preparing spray or using undiluted concentrate, wear chemical resistant waterproof clothing over a layer of normal clothing and a washable hat, elbow-length chemical resistant gloves, impervious footwear and full facepiece respirator with organic vapour/gas cartridge or canister. If applying by boomspray equipment with enclosed operator's cab and air filtration or aerial spraying equipment, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. If applying by boomspray equipment with open operator's cab or hand-held spray equipment wear chemical resistant waterproof clothing over a layer of normal clothing and a washable hat, elbow-length chemical resistant gloves and full facepiece respirator with organic vapour/gas cartridge or canister.

Personal Hygiene: Poisonous if absorbed by skin contact, inhaled or swallowed. Corrosive to the eyes and skin. Will irritate the nose and throat. Avoid contact with the eyes and skin. Do not inhale vapour or spray mist. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water Shower at the end of the workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear red/brown liquid.
Odour: Ammoniacal odour.
Boiling point: Approximately 100° C.
Freezing point: Approximately 0° C.
Specific Gravity: 1.2 - 1.3 at 20°C.
Solubility in Water: Soluble in water.
pH: No data.
Flammability: Not flammable.
Corrosive hazard: Not corrosive.
Flashpoint (°C): Not flammable.
Flammability Limits (%): Not established.
Poisons Schedule: This product is a schedule 6 (S6) poison.
Formulation type: Aqueous concentrate.

10. STABILITY AND REACTIVITY

Chemical Stability: Normally stable. Active may degrade in strong UV light.
Conditions to avoid: Very high or low temperatures.
Materials to avoid: Strong oxidising agents.
Hazardous decomposition products: Oxides of nitrogen and chlorine. Burning with limited oxygen may produce carbon



monoxide.

Hazardous reactions: Not known. Does not polymerise.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: 2,4-D acid is of slight to moderate toxicity. The oral LD50 of 2,4-D ranges from 375 to 666 mg/kg in the rat, 370 mg/kg in mice, and from less than 320 to 1000 mg/kg in guinea pigs. The dermal LD50 values are 1500 mg/kg in rats and 1400 mg/kg in rabbits, respectively. In humans, prolonged breathing of 2,4-D causes coughing, burning, dizziness, and temporary loss of muscle coordination. Other symptoms of poisoning can be fatigue and weakness with possible nausea. The dimethyl ammonium salt is slightly less toxic.

Chronic toxicity: Rats given high amounts, 50 mg/kg/day, of 2,4-D in the diet for 2 years showed no adverse effects. Dogs fed lower amounts in their food for 2 years died, probably because dogs do not excrete organic acids efficiently. A human given a total of 16.3 g in 32 days therapeutically, lapsed into a stupor and showed signs of incoordination, weak reflexes, and loss of bladder control.

Range of effects. Excessive exposure may affect human health as follows:

Skin contact: May cause irritation unless rinsed immediately. There is also potential for absorption of toxic amounts of the chemical. Treat all skin contact as an emergency.

Eye contact: Likely to cause severe irritation unless rinsed immediately.

Inhalation/ingestion :Prolonged breathing of 2,4-D causes coughing, burning, dizziness, and temporary loss of muscle coordination. Other symptoms of poisoning can be fatigue and weakness with possible nausea. On rare occasions following high levels of exposure, there can be inflammation of the nerve endings with muscular effects.

Dose/conc./conditions likely to cause injury:

Delayed effects if any:

Carcinogenic effects: 2,4-D fed to rats for 2 years caused an increase in malignant tumors. Female mice given a single injection of 2,4-D developed cancer (reticulum-cell sarcomas). Another study in rodents shows a low incidence of brain tumors at moderate exposure levels (45 mg/kg/day) over a lifetime. However, a number of questions have been raised about the validity of this evidence and thus about the carcinogenic potential of 2,4-D. In humans, a variety of studies give conflicting results. Several studies suggest an association of 2,4-D exposure with cancer. An increased occurrence of non-Hodgkin's lymphoma was found among a Kansas and Nebraska farm population associated with the spraying of 2,4-D. Other studies done in New Zealand, Washington, New York, Australia, and on Vietnam veterans from the U.S. were all negative. There remains considerable controversy about the methods used in the various studies and their results. Thus, the carcinogenic status of 2,4-D is not clear. Organ toxicity: Most symptoms of 2,4-D exposure disappear within a few days, but there is a report of liver dysfunction from long-term exposure.



Relevant negative data:

Reproductive effects: High levels of 2,4-D (about 50 mg/kg/day) administered orally to pregnant rats did not cause any adverse effects on birth weights or litter size. Higher doses (188 mg/kg/day) resulted in fetuses with abdominal cavity bleeding and increased mortality. DNA synthesis in the testes was significantly inhibited when mice were fed large amounts (200 mg/kg/day) of 2,4-D. The evidence suggests that if 2,4-D causes reproductive effects in animals, this only occurs at very high doses. Thus reproductive problems associated with 2,4-D are unlikely in humans under normal circumstances.

Teratogenic effects: 2,4-D may cause birth defects at high doses. Rats fed 150 mg/kg/day on days 6 to 15 of pregnancy had offspring with increased skeletal abnormalities, such as delayed bone development and wavy ribs. This suggests that 2,4-D exposure is unlikely to be teratogenic in humans at expected exposure levels.

Mutagenic effects: 2,4-D has been very extensively tested and was found to be non-mutagenic in most systems. 2,4-D did not damage DNA in human lung cells. However, in one study, significant effects occurred in chromosomes in cultured human cells at low exposure levels. The data suggest that 2,4-D is not mutagenic or has low mutagenic potential.

12. ECOLOGICAL AND ECOTOXICOLOGICAL INFORMATION

Environmental Toxicology:

This product is biodegradable. It will not accumulate in the soil or water or cause long term problems. 2,4-D is harmful to wildfowl and slightly to moderately toxic to birds. The LD50 is 1000 mg/kg in mallards, 272 mg/kg in pheasants, and 668 mg/kg in quail and pigeons. Limited studies indicate a half-life of less than 2 days in fish and oysters. Concentrations of 10 mg/L for 85 days did not adversely affect the survival of adult dungeness crabs. For immature crabs, the 96-hour LC50 is greater than 10 mg/L, indicating that 2,4-D is only slightly toxic. Brown shrimp showed a small increase in mortality at exposures of 2 mg/L for 48 hours. Moderate doses of 2,4-D severely impaired honeybees brood production. At lower levels of exposure, exposed bees lived significantly longer than the controls. The honeybee LD50 is 0.0115 mg/bee.

Environmental Fate:

2,4-D has low soil persistence. The half-life in soil is less than 7 days. Soil microbes are primarily responsible for its breakdown. In aquatic environments, microorganisms readily degrade 2,4-D. Rates of breakdown increase with increased nutrients, sediment load, and dissolved organic carbon. Under oxygenated conditions the half-life is 1 week to several weeks. 2,4-D interferes with normal plant growth processes. Uptake of the compound is through leaves, stems, and roots. Breakdown in plants is by a variety of biological and chemical pathways. 2,4-D is toxic to most broad leaf crops especially cotton, tomatoes, beets, and fruit trees.

13. DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see Section 8. Keep material out of streams and sewers. Dispose of drummed wastes, including



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decontamination solution in accordance with the requirements of Local or State Waste Management Authorities. In rural areas contact ChemClear <http://www.chemclear.com.au> for help with collection of unwanted rural chemicals.

Disposal of empty containers:

Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT:

This product is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail. Not classified as a Dangerous Good for marine or air transport.

UN No: 3082

Class: 9

Packing group: III

SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS LIQUID, N.O.S.

15. REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

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

16. OTHER INFORMATION

Version 1.0

Revision Date: 2022.10.16

The information contained in this MSDS is provided in good faith and is believed to be correct and the date hereof. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

Please read all labels carefully before using product.