

Material Safety Data Sheet

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Infosafe No. 3NU1H Issue Date : December 2003 ISSUED by CROPCARE

Product Name : **TRIFOLAMINE Selective Herbicide**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name TRIFOLAMINE Selective Herbicide
Product Code 0272
Product Use For control of broadleaf weeds in seedling and established lucerne, medic and sub-clover pastures and cereal crops undersown with lucerne, medic or sub-clover as specified in the Directions for Use table.
Company Name CROP CARE AUSTRALASIA PTY LTD (ABN 53 061 362 347)
Address 77 Tingira Street Pinkenba
Queensland 4008 Australia
Emergency Tel. 1 800 033 111
Telephone/Telex Number Tel: (07) 3867 9100 Fax: (07) 3867 9110
Product Type Group I Herbicide
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. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Ingredients	Name	CAS	Proportion
	2,4-DB (present as the dimethylamine salt)	94-82-6	500 g/L
	Hydroxyethane-1, 1-diphosphoric acid	2809-21-4	10-30 %w/w
	Water		Remainder

3. HAZARDS IDENTIFICATION

Harmful if swallowed.
Risk of serious damage to eyes.

Other Information Poisons Schedule 5

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.

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 Aged Care 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 swallowed (more than about one tablespoon for an adult person) 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 Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

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Eye If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
Seek medical advice.

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.

Hazardous Non-combustible.

Combustion Products If involved in a fire, it will emit carbon monoxide, phosgene and possibly oxides of phosphorous.

Protective Equipment Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

Other Information Prevent 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.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

7. HANDLING AND STORAGE

Storage Store in the closed, original container in a dry, well ventilated area out of direct sunlight.
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.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits No exposure standard for this product has been set, however, an exposure standard has been set for dimethylamine vapour at 2 ppm.

Personal Protective Equipment When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles.

Eng. Controls Use in a well ventilated area only.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Brown liquid

Odour Faint ammoniacal odour.

Melting Point Approx -5°C

Solubility in Water Soluble in water.

Boiling Point 100°C

Specific Gravity (H₂O=1) 1.179 - 1.181

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pH Value 9.8 - 10.1
Vapour Pressure Active ingredient considered non volatile
Volatile Component ~26%
Flash Point Not flammable
Flammability Not flammable.
Flammable Limits Not flammable
LEL

10. STABILITY AND REACTIVITY

Hazardous Polymerization Hazardous polymerisation is not possible.
Materials to Avoid Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-DB acid and largely de-activate the product and cause blockages in spray equipment. The addition of a strong alkali such as caustic soda will cause release of dimethylamine vapour. Dimethylamine is moderately toxic, LD50 (oral, rat) is 700 mg/kg and a TLV of 2 ppm (TWA) has been set.
Hazardous Reaction Keep away from strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Toxicology Information No harmful effects are expected if the precautions on the label and this MSDS are followed.
Inhalation When applying the product as a spray avoid breathing in spray mists.
Ingestion May cause irritation to mouth, throat and stomach.
Skin Prolonged contact with the concentrate may cause irritation and cause skin eruptions.
Eye The concentrate will cause severe irritation and possible damage unless washed off immediately.
Chronic Effects Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.
Acute Toxicity - Oral LD50 (rat) 700 mg/kg for technical 2,4-DB
LD50 (rat) 700 mg/kg for dimethylamine
Acute Toxicity - Dermal LD50 (rat) 800 mg/kg for technical 2,4-DB
Human Effects Symptoms of acute overexposure may include: headache, nausea and vomiting. In extreme cases, possibly twitching and spasms, dyspnea, cyanosis and exhaustion.
Other Information The Australian Acceptable Daily Intake (ADI) for 2,4-DB for a human is 0.004 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.9 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, August 2003).

12. ECOLOGICAL INFORMATION

Other Precautions Do not spray in high winds.
Do not contaminate dams, waterways or sewers with this product.
Persistence / Degradability Average field half life of 2,4-DB dimethylamine salt is 10 days.
Acute Toxicity - Fish The following is data for the active ingredient, 2,4-DB amine salt and esters. LC50 (96 hr) for rainbow trout is 4 mg/l.

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Acute Toxicity - Other Not toxic to bees.

Organisms

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 (ChemCollect).

Container Disposal 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.

14. TRANSPORT INFORMATION

U.N. Number None Allocated

Proper Shipping Name None Allocated

DG Class None Allocated

Hazchem Code None Allocated

Packing Group None Allocated

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

Risk Phrase R22 Harmful if swallowed.
R41 Risk of serious damage to eyes.

Safety Phrase S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39 Wear suitable gloves and eye/face protection.

Poisons Schedule S5

Hazard Category Harmful, Irritant

Packaging & Labelling CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

AICS (Australia) All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

Contact Person/Point Normal Hours: Mr Volker Maier Phone: (03) 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498

Revisions Highlighted First Issue
...End Of MSDS...