
Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

4FARMERS TRI-ALLATE 500 EC SELECVE HERBICIDE

SYNONYMS

herbicide

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains tri-allate)

PRODUCT USE

Group E herbicide.

For the control of Wild oats in Wheat, Triticale, Chickpeas, Barley, Peas, Linseed, Lupins, Canola (Rapeseed), Faba beans and Safflower and for use in mixtures with TriflurX for control of a range of grass and broadleaf weeds in no-till cropping systems, pre-sowing or incorporated by sowing (IBS).

SUPPLIER

Company: 4Farmers

Address:

1/70 McDowell Street

Welshpool, 6106

Australia

Telephone: +61 8 9356 3445

Fax: +61 8 9356 3447

Email: admin@4farmers.com.au

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE**HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.****RISK**

- Harmful if swallowed.
- May cause SENSITISATION by skin contact.
- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- HARMFUL- May cause lung damage if swallowed.

SAFETY

- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with eyes.
- Wear suitable protective clothing.

- To clean the floor and all objects contaminated by this material, use water and detergent.

- This material and its container must be disposed of in a safe way.
- Keep away from food, drink and animal feeding stuffs.
- In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).
- Use appropriate container to avoid environmental contamination.
- Avoid release to the environment. Refer to special instructions/Safety data sheets.
- This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
tri- allate (500g/L)	2303-17-5	47.5
solvent naphtha petroleum, heavy aromatic surfactant	64742-94-5	44.7 0-10

Section 4 - FIRST AID MEASURES

SWALLOWED

- - If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Avoid giving milk or oils.
- Avoid giving alcohol.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- - If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

- For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:
 - Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
 - Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ 50 mm Hg) should be intubated.
 - Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
 - A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically.
- Medical literature on human exposure to thiocarbamate derivatives is scarce.
- Animal studies suggest that contact dermatitis and thyroid hyperplasia may occur following exposure.
 - These compounds do not have the cholinergic properties of structurally related carbamate insecticides.
 - The usual measures for gut and skin contamination are recommended for large doses.
 - Some thiocarbamates are structurally similar to disulfiram and may cause the characteristically unpleasant alcohol type reactions lasting for several hours; they may respond to fluids, oxygen and analgesics. Dysrhythmias may occur and patients with serious reactions should have cardiac monitoring.
- As a general rule thiocarbamates can be absorbed by the skin, mucous membranes and respiratory and gastrointestinal tract. They are eliminated quickly via expired air and urine.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- - Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

FIRE/EXPLOSION HAZARD

- - Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

- - Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

•3Z

Personal Protective Equipment

Breathing apparatus.

Gas tight chemical resistant suit.

Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Environmental hazard - contain spillage.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

MAJOR SPILLS

- Environmental hazard - contain spillage.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- - Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- DO NOT allow clothing wet with material to stay in contact with skin.
- Electrostatic discharge may be generated during pumping - this may result in fire.
- Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec).

4FARMERS TRI-ALLATE 500 EC SELECVE HERBICIDE

Chemwatch Independent Material Safety Data Sheet

Issue Date: 31-Mar-2011

C9317EC

CHEMWATCH 26-2349

Version No:2.0

CD 2011/1 Page 4 of 8

Section 7 - HANDLING AND STORAGE

- Avoid splash filling.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.

SUITABLE CONTAINER

- - Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- - Thiocarbamates and dithiocarbamates are incompatible with acids, peroxides, and acid halides.
- Flammable gases are generated by the combination of thiocarbamates and dithiocarbamates with aldehydes, nitrides, and hydrides.
- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- - Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	Notes
Australia Exposure Standards	4Farmers Tri- Allate 500 EC selecve Herbicide (Petrol (gasoline))	900	(see Chapter 16)

The following materials had no OELs on our records

- tri- allate: CAS:2303- 17- 5

PERSONAL PROTECTION

RESPIRATOR

- type a-p filter of sufficient capacity.

EYE

- - Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- - Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
 - frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.

OTHER

- - Overalls.
- P.V.C. apron.
- Barrier cream.

continued...

4FARMERS TRI-ALLATE 500 EC SELECVE HERBICIDE

Chemwatch Independent Material Safety Data Sheet

Issue Date: 31-Mar-2011

C9317EC

CHEMWATCH 26-2349

Version No:2.0

CD 2011/1 Page 5 of 8

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- Skin cleansing cream.

ENGINEERING CONTROLS

■ Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Amber to brown liquid with a typical solvent odour; emulsifies in water.

PHYSICAL PROPERTIES

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	160	Solubility in water (g/L)	Partly Misc ible
Flash Point (°C)	Not Applicable	pH (1% solution)	Not Availab le
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not A vailable
Autoignition Temp (°C)	Not Applicable	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	1.053
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	45 (solvent)	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- - Presence of incompatible materials.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

- Harmful if swallowed.
- HARMFUL- May cause lung damage if swallowed.
- Vapours may cause dizziness or suffocation.

CHRONIC HEALTH EFFECTS

- May cause SENSITISATION by skin contact.
- Harmful: danger of serious damage to health by prolonged exposure if swallowed.

TOXICITY AND IRRITATION

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC:

4FARMERS TRI-ALLATE 500 EC SELECVE HERBICIDE:

■ for petroleum:

This product contains benzene which is known to cause acute myeloid leukaemia and n-hexane which has been shown to metabolize to compounds which are neuropathic.

This product contains toluene.

This product contains ethyl benzene and naphthalene from which there is evidence of tumours in rodents

Carcinogenicity: Inhalation exposure to mice causes liver tumours, which are not considered relevant to humans.

TRI-ALLATE:

4FARMERS TRI-ALLATE 500 EC SELECVE HERBICIDE:

- Triallate is slightly toxic by ingestion to humans. It is practically nontoxic via dermal exposure or inhalation triallate at doses of 50 to 2,000 mg/kg, abnormal behavior was observed at doses of 100 mg/kg and above.
- The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.<</>.
- Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

continued...

4FARMERS TRI-ALLATE 500 EC SELECVE HERBICIDE

Chemwatch Independent Material Safety Data Sheet

Issue Date: 31-Mar-2011

C9317EC

CHEMWATCH 26-2349

Version No:2.0

CD 2011/1 Page 6 of 8

Section 11 - TOXICOLOGICAL INFORMATION

TRI-ALLATE:

TOXICITY

Oral (rat) LD50: 800 mg/kg

Oral (rat) LD50: 1100 mg/kg *

Inhalation (rat) LC50: >5.3 mg/l

Dermal (rabbit) LD50: 2225 mg/kg

Dermal (rabbit) LD50: 8200 mg/kg *

■ [* The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection Council].

Toxicity Class: WHO III;EPA III

NOEL (2 y) for mice 20 mg/kg, for rats 50 mg/kg;(1 y) for dogs 2.5 mg/kg *

Inhalation of saturated air for 12 hours had no harmful effects on rats *

ADI: 0.005 mg/kg/day

NOEL: 0.5 mg/kg/day

IRRITATION

Skin (rabbit):highly irritating*

Eye (rabbit): non- irritating *

SOLVENT NAPHTHA PETROLEUM, HEAVY AROMATIC:

TOXICITY

Oral (rat) LD50: 3200 mg/kg

Dermal (rabbit) LD50: >3160 mg/kg [PETROFIN]

IRRITATION

Eye (rabbit): Irritating

Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
4Farmers Tri- Allate 500 EC selecve Herbicide tri- allate	No Data Available HIGH	No Data Available No Data Available	HIGH	MED
solvent naphtha petroleum, heavy aromatic	No Data Available	No Data Available		

Section 13 - DISPOSAL CONSIDERATIONS

■ - Containers may still present a chemical hazard/ danger when empty.

- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.

- DO NOT allow wash water from cleaning or process equipment to enter drains.

- It may be necessary to collect all wash water for treatment before disposal.

- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

- Where in doubt contact the responsible authority.

- Recycle wherever possible or consult manufacturer for recycling options.

- Consult State Land Waste Authority for disposal.

- Bury or incinerate residue at an approved site.

- Recycle containers if possible, or dispose of in an authorised landfill.

continued...

4FARMERS TRI-ALLATE 500 EC SELECV E HERBICIDE

Chemwatch Independent Material Safety Data Sheet

Issue Date: 31-Mar-2011

C9317EC

CHEMWATCH 26-2349

Version No:2.0

CD 2011/1 Page 7 of 8

Section 14 - TRANSPORTATION INFORMATION

■ *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;*

(a) *packagings;*

(b) *IBCs; or*

(c) *any other receptacle not exceeding 500 kg(L).*

- *Australian Special Provisions (SP AU01) - ADG Code 7th Ed.*

Labels Required: MISCELLANEOUS

HAZCHEM:

●3Z (ADG7)

ADG7:

Class or Division:	9	Subsidiary Risk:	None
UN No.:	3082	Packing Group:	III
Special Provision:	179, 274, 331, 335, AU01	Limited Quantity:	5 L
Portable Tanks & Bulk Containers - Instruction:	T4	Portable Tanks & Bulk Containers - Special Provision:	TP1, TP29
Packagings & IBCs - Packing Instruction:	PP1	Packagings & IBCs - Special Packing Provision:	P001, IBC03, LP01

Name and Description: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains tri-allate)

Land Transport UNDG:

Class or division:	9	Subsidiary risk:	None
UN No.:	3082	UN packing group:	III
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains tri-allate)			

Air Transport IATA:

ICAO/IATA Class:	9	ICAO/IATA Subrisk:	None
UN/ID Number:	3082	Packing Group:	III
Special provisions:	A97		
Cargo Only			
Packing Instructions:	450 L	Maximum Qty/Pack:	450 L
Passenger and Cargo		Passenger and Cargo	
Packing Instructions:	964	Maximum Qty/Pack:	964
Passenger and Cargo		Passenger and Cargo	
Limited Quantity		Limited Quantity	
Packing Instructions:	30 kg G	Maximum Qty/Pack:	Y964

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. *(CONTAINS TRI-ALLATE)

Maritime Transport IMDG:

IMDG Class:	9	IMDG Subrisk:	None
UN Number:	3082	Packing Group:	III
EMS Number:	F- A , S- F	Special provisions:	179 274 335 909
Limited Quantities:	5 L	Marine Pollutant:	Yes
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains tri-allate)			

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE S5

REGULATIONS

Regulations for ingredients

tri-allate (CAS: 2303-17-5) is found on the following regulatory lists;

"Australia ADI list - Acceptable daily intakes for agricultural and veterinary chemicals", "Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia New Zealand Food Standards Code - Maximum Residue Limits (Australia only) - Schedule 1", "OECD Representative List of High Production Volume (HPV) Chemicals", "OSPAR List of Substances of Possible Concern"

continued...

4FARMERS TRI-ALLATE 500 EC SELECV E HERBICIDE

Chemwatch Independent Material Safety Data Sheet

Issue Date: 31-Mar-2011

C9317EC

CHEMWATCH 26-2349

Version No:2.0

CD 2011/1 Page 8 of 8

Section 15 - REGULATORY INFORMATION

solvent naphtha petroleum, heavy aromatic (CAS: 64742-94-5) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for 4Farmers Tri-Allate 500 EC selecv e Herbicide (CW: 26-2349)

Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

•The following is a list of Aryl Amines that may be formed by reductive cleavage of tri- allate(2303- 17- 5)

AMINE CAS

•The following is a list of Aryl Amines that may be formed by reductive cleavage of solvent naphtha petroleum, heavy aromatic(64742-

AMINE CAS

94- 5)

AMINE CAS

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 31-Mar-2011

Print Date: 12-Apr-2011

This is the end of the MSDS.