



SAFETY DATA SHEET

TOKUTHION®

Date of Issue: 14 February 2019

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Chemical name of active ingredient(s): Prothiofos
Recommended use: Insecticide

Supplier: Etec Crop Solutions, an Arysta LifeScience Group Company.
PO Box 51584
Pakuranga, Auckland
Phone 0800 100 325

Emergency telephone number: 0800 CHEM CALL (0800 243 622)
24 Hours

2. HAZARDS IDENTIFICATION

Hazard Classification:

- 3.1C – flammable liquid
- 6.1D – acute toxicant
- 6.3A – skin irritant
- 6.4A – eye irritant
- 6.5B – sensitiser
- 6.9A – target organ toxicant
- 9.1A – aquatic toxicant
- 9.3B – terrestrial vertebrate toxicant
- 9.4B – invertebrate toxicant

Required identification Details:

WARNING
Flammable Liquid and Vapour
May be harmful if swallowed, inhaled or absorbed through the skin.
May cause skin irritation.
May cause eye irritation.
May cause skin sensitization from prolonged skin contact.
May cause organ damage from repeated oral exposure at high doses.
Very toxic to aquatic organisms with long-lasting effects.
Toxic to terrestrial vertebrates.
Toxic to terrestrial invertebrates.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Prothiofos	34643-46-4	50
Xylene	1330-20-7	40
n-Butanol	71-36-3	2

4. FIRST-AID MEASURES

Description of necessary first aid measures:

Effects and symptoms

First-aid measures

For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.

Inhalation:

Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Use mouth to nose rather than mouth to mouth. Seek medical assistance immediately.

Ingestion:

Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.

Skin contact:

Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water.

Eye contact:

If a large area is affected seek medical assistance. Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance. Remove contact lenses, if present and easy to do.

First Aid Facilities

Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Notes to a physician:

Cholinesterase inhibitor. Atropine tablets 0.6mg and activated charcoal (for swallowing cases).

5. FIRE-FIGHTING MEASURES

HAZCHEM Code:

3Y

Extinguishing media:

Alcohol resistant foam, Foam, Water fog, Carbon dioxide or Dry chemical.

Hazardous thermal (de)composition products:

Hydrogen chloride, Oxides of carbon, Sulphur and Phosphorous may be formed.

Protection of fire-fighters:

Full protective clothing and self-contained breathing apparatus.

Specific methods:

Do not allow contaminated run-off to enter drains.

Other Information:

Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces,

forming potentially explosive mixtures. They may also flash back considerable distances.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

For appropriate personal protective equipment (PPE), refer section 8.

Environmental precautions:

Prevent from entering drains, waterways or sewers.

Spills and Disposal:

Wear protective clothing. Clear area of unprotected personnel. Sweep up solids without generating dust (use water to dampen). Contain and absorb liquid spills with inert material and place in waste containers. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.

7. HANDLING AND STORAGE

Safe Handling:

Avoid skin and eye contact and inhalation of spray mist. APPROVED HANDLER: This product must be under the control of an approved handler when used by a commercial contractor.

RECORD KEEPING: Records of use as described in NZS 8409 Management of Agrichemicals must be kept if more than 1L is applied within 24 hours in a place where the product is likely to enter air or water and leave the place.

This product must not be applied onto or into water.

Keep out of reach of children.

Keep away from extreme heat and open flames.

Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals.

Always read the label and any attached leaflet before use.

Conditions for safe storage, including any incompatibilities:

Other Information

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Guidelines

Occupational exposure limits:

No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.

WES set for Xylene [CAS 1330-20-7]; - 8h TWA (vapour & particulates): 350 mg/m³, - 15 min STEL

655 mg/m³. n-Butanol CAS 71-36-3]: - 8h TWA (vapour & particulates): 152 mg/m³, - 15 min STEL

Engineering measures

Appropriate engineering controls:

Transfer or mix in adequate ventilation.

Personal Protective Equipment

Detail specifications for equipment:

Chemical goggles or face shield when handling or using this product. Avoid breathing in vapours or aerosol from the product. Use an appropriate respirator if exposed to the vapours or aerosol from the product.

For short term exposure to mists and aerosols use a mask and filter eg. Filter A-P2 or a filter canister for organic vapours. Wear chemical resistant protective clothing: gloves, waterproof hat, coat and trousers (worn outside rubber boots) when using. Wash protective clothing daily after work.
Do not eat, drink or smoke while using.

General hygiene:

Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Colour:	Brown
Odour:	Xylene odour
Volatile Component:	NA
Vapour Pressure:	1 kPa
Density:	1.07
Boiling Point:	138 – 142 °C
Solubility in water:	Emulsifies in water.
Partition Coefficient: n-octanol/water:	Xylene – 3.12-3.20; Prothiofos 5.67
pH:	5 – 6
Flashpoint:	31°C
Auto-ignition:	500 °C
Flammable Limits:	Upper – 6%; Lower – 1.1%
Other Information:	

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of handling and storage.
Conditions to avoid:	Keep away from sources of sparks or ignitions.
Incompatible Materials:	Strong acids, strong bases, oxidizing agents.
Hazardous decomposition Products:	Hydrogen chloride, Oxides of Carbon, phosphorous and sulphur.
Hazardous polymerization:	Not known to occur.
Specific Data:	
Hazardous reactions:	

11. TOXICOLOGICAL INFORMATION

Acute toxicity – Oral:	LD50 (rat) = 1800 mg/Kg
Acute toxicity - Dermal:	LD50 (rat) = 5,000 mg/Kg
Acute toxicity – Inhalation:	LC50 (rat) > 2.7 mg/Kg (4hr aerosol) prothiofos
Other:	The main health effects from repeated exposure is cholinesterase inhibition. Repeated overexposure to xylene may cause liver and kidney damage. Xylene is not mutagenic, not carcinogenic and does not impair fertility.

12. ECOLOGICAL INFORMATION

Acute Toxicity – Fish:	LC50 (96h) rainbow trout = 0.7 mg/L (Prothiofos)
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LC50 daphnia = 0.014 mg/L (Prothiofos)

LD50 (quail) = 100 - 200 mg/kg (Prothiofos)

Terrestrial vertebrates - Birds:

This product is very toxic to aquatic organisms. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Toxic to bees - Spray must not be applied to plants in flower, or are likely to flower within 7 days, if they are likely to be visited by bees.

13. DISPOSAL CONSIDERATIONS

Product disposal : Dispose of product only by using according to the label, or at an approved landfill.
Container disposal: Ensure container is completely empty. Crush and bury in an appropriate landfill.

14. TRANSPORT INFORMATION - International transport regulations

UN number: 1993
Class or Division: 3
Hazchem Code: 3Y
Packing Group: III
Marine Pollutant: Yes
Proper shipping name: FLAMMABLE LIQUID, N.O.S. (Prothiofos & Xylene)

IMDG EMS: Do not carry more than 1L of Tokuthion on a passenger service vehicle.
Other Information: Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. REGULATORY INFORMATION

ACVM Registered Number: Registered pursuant to the ACVM Act 1997, No. P002731. See www.foodsafety.govt.nz for registration conditions.
HSNO Approval Code: Approved pursuant to the HSNO Act 1996, Approval Code HSR000200. See www.epa.govt.nz for approval controls.
Packaging & Labelling: WARNING - keep out of reach of children.
Hazard Rating Systems:

16. OTHER INFORMATION

Additional information: **Original Issue Date:** 14/02/19
Revision Date:

EXCLUSION OF LIABILITY: PLEASE READ

This Safety Data Sheet is based on the most recent information available. To the extent permitted by law, users of this information accept that neither the manufacturer, Etec Crop Solutions Limited as distributor, nor any other distributor have any liability or responsibility whatsoever for any loss, damage or injury whether in contract or tort, whether direct, indirect or consequential howsoever arising in connection with the supply of these information.