

Infosafe No™ 3NUJT	Issue Date : August 2019	ISSUED by NUFARM
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 Product Name **TANDUS® XL**

1. Identification

GHS Product Identifier	TANDUS® XL
Product Code	00618
Product Type	Herbicide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency phone number	0800 651 911
Email	info@nz.nufarm.com
Recommended use of the chemical and restrictions on use	For broadleaf weed control in cereals and apples.
Other Information	This SDS 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. Hazard Identification

Other Information	6.1E acute toxicant, 6.3A skin irritant, 8.3A eye corrosive, 6.8A reproductive or developmental toxicant, 9.1A aquatic toxicant, 9.2A soil toxicant, TOXICITY Toxic - may cause reproductive/development damage from repeated oral exposure. Harmful - may be harmful if swallowed, inhaled or absorbed through the skin, or if aspirated when swallowed or vomited. May cause skin irritation. CORROSIVE Danger - this product is corrosive and may cause eye damage. ECOTOXIC Very toxic to aquatic organisms with long-lasting effects. Selective herbicide - very toxic to some plant species.
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3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	Name	CAS	Proportion
	Fluroxypyr (present as the methylheptyl ester)	81406-37-3	400 g/L
	N-Methyl-2-pyrrolidone (NMP)	872-50-4	100 g/L
	Aromatic Hydrocarbon	64742-94-5	30-60 %
	Ethoxylated alcohol	68439-49-6	30 g/L
	Other ingredients		10 - 30%

4. First-aid measures

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. 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	Immediately flush body and clothes with large amounts of water. Remove

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Eye contact contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.

First Aid Facilities 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.

Advice to Doctor Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Treat symptomatically. If vomiting occurs, solvent present may cause pulmonary pneumonitis.

5. Fire-fighting measures

Suitable extinguishing media Water fog, foam, carbon dioxide or dry chemical. Avoid using large volumes of water which would spread the product.

Hazards from Combustion Products If involved in a fire, it will emit hydrogen chloride, hydrogen fluoride and possibly phosgene.

Special Protective Equipment for fire fighters Full protective clothing and self-contained breathing apparatus.

Specific Methods Keep up wind. Do not allow washings to reach sewage or effluent systems. Keep containers cool with water spray.

Hazchem Code 2X

Other Information Location Certificate: Not applicable
Hazardous Atmosphere Zone: Not applicable
Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & Disposal Wear protective clothing. Clear area of unprotected personnel. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill. Wash area with water and detergent and absorb with inert material. Dispose of waste safely in an approved landfill.

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

Environmental Precautions Prevent from entering drains, waterways or sewers. This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent contamination of soil and water.

7. Handling and storage

Precautions for 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 if applied in a wide dispersive manner, or used by a commercial contractor. TRACKING: Is not required. RECORD KEEPING: Records of use as described in the NZS 8409 Management of Agrichemicals must be kept. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants. Do not apply TANDUS XL into or onto water. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Stores containing 100L of TANDUS XL require secondary containment and are subject to signage, and more than 100L require emergency response plans.

Corrosiveness Corrosive to eyes.

Other Information Always read the label and any attached leaflet before use. Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

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Occupational exposure limit values	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product. WES TWA for 1-methyl-2-pyrrolidone (NMP) = 25ppb, 103 mg/m ³ (skin)
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear safety goggles, chemically resistant gloves, cotton overalls buttoned to the neck and wrist, and boots.
Hygiene Measures	Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work. Wash splashes of concentrate from skin immediately.

9. Physical and chemical properties

Form	Liquid
Appearance	Amber
Odour	Typical solvent odour
Boiling Point	~200°C (solvent)
Solubility in Water	Disperses (emulsion)
Specific Gravity	1.122
pH	4.0 - 7.5
Vapour Pressure	0.02 mPa @ 20°C
Volatile Component	30%
Flash Point	105°C (pmcc)
Other Information	(EC) Emulsifiable concentrate

10. Stability and reactivity

Chemical Stability	Stable under normal conditions of handling and storage. Hydrolyses at pH >9
Possibility of hazardous reactions	Keep away from strong oxidising agents.
Hazardous Polymerization	Hazardous polymerisation will not occur.

11. Toxicological Information

Toxicology Information	No specific toxicological data is available for this product. Data below is for constituents.
Acute Toxicity - Oral	LD50 (rat) >3,162 mg/kg for fluroxypyr methyl heptyl ester
Acute Toxicity - Dermal	LD50 (rat) >2,000 mg/kg for fluroxypyr methyl heptyl ester
Acute Toxicity - Inhalation	LC50 (rat, 4h) = >1mg/L for fluroxypyr methyl heptyl ester
Ingestion	Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
Inhalation	When applying the product as a spray avoid breathing in spray mist. High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, and may have other central nervous system effects.
Skin	Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.
Skin Sensitisation	Product is not a skin sensitiser.
Reproductive Toxicity	May cause reproductive/development damage from repeated oral exposure (n-methyl-2-pyrrolidone).
Chronic Effects	Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Serious eye damage/irritation	Corrosive to eyes

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Skin corrosion/irritation The product is a skin irritant.

Other Information The Australian Acceptable Daily Intake (ADI) for fluroxypyr for a human is 0.2 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 20 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, Office of Chemical Safety, 'ADI List', March 2014).

12. Ecological information

Persistence and degradability soil DT50 >30 days for fluroxypyr methyl heptyl ester

Bioaccumulative Potential fluroxypyr methyl heptyl ester is bioaccumulative.
Kow logP = 4.53 (pH5)

Environmental Protection Spray drift can cause damage.

Basis for Assessment Ecotoxicological data have not been determined specifically for this product. Data below is for the active ingredient unless otherwise stated.

Acute Toxicity - Fish LC50 (96hr) for rainbow trout is 3.5 mg/l for a similar product

Acute Toxicity - Daphnia EC50 (48h) Daphnia magna = >0.2 mg/L for fluroxypyr methyl heptyl ester

Acute Toxicity - Algae EC50 (5d) Skeletonema costatum (diatom) = 0.292mg/L for fluroxypyr methyl heptyl ester
EC50 algae = 0.05 - 50mg/L for ethoxylated alcohol

Acute Toxicity - Other Organisms Birds: LD50 mallard duck = >2,000mg/kg for fluroxypyr methyl heptyl ester
Bees: LD50 (oral and contact, 48h) = >100µg/bee for fluroxypyr methyl heptyl ester
Worms: LC50 (earthworm) = >1,000mg/kg for fluroxypyr methyl heptyl ester

13. Disposal considerations

Product Disposal Dispose of product only by using according to the label, or at an approved landfill.

Container Disposal Triple rinse empty container and add rinsate to the spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

14. Transport information

Transport Information It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

U.N. Number 3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (fluroxypyr, 40%)

Transport hazard class(es) 9

Hazchem Code 2X

Packaging Method -

Packing Group III

EPG Number -

IERG Number 47

IMO Marine Pollutant Yes. Environmentally Hazardous Substance mark required.

Other Information Do not carry this product on a passenger service vehicle.
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

National and or International Regulatory Information Registered pursuant to the ACVM Act 1997, No. P7849
See www.foodsafety.govt.nz for registration conditions
Approved pursuant to the HSNO Act 1996, Approval Code HSR007981
See www.epa.govt.nz for approval controls.



Safety Data Sheet

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Packaging & Labelling HARMFUL * CORROSIVE * ECOTOXIC - keep out of reach of children
Hazard Rating NFPA/HMIS: 3-1-1
Systems

16. Other Information

Date of preparation or last revision of SDS July 2014

Contact Person/Point IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Tollfree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
5 yearly review carried out.

Revisions Highlighted

...End Of MSDS...

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