

Infosafe No™ 3NU2K	Issue Date : July 2016	ISSUED by NUFARM
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 Product Name **TriflurX Selective Herbicide**

Classified as hazardous

1. Identification

GHS Product Identifier	TriflurX Selective Herbicide
Product Code	0792 NUL1789
Product Type	Group D Herbicide
Company Name	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address	103-105 Pipe Road Laverton North Victoria 3026 Australia
Telephone/Fax Number	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001
Emergency phone number	1800 033 498 (24hr Australia)
Recommended use of the chemical and restrictions on use	A pre-emergence herbicide for the control of annual grasses and certain broadleaf weeds in certain horticultural and agricultural crops as listed in the Directions For Use table on the label.
Other Information	This Safety Data Sheet describes the properties of the concentrated product. The physical properties and the assessments may not apply to the properties of the product once it has been diluted for application.

2. Hazard Identification

GHS classification of the substance/mixture	CA2 Carcinogenicity: Category 2 SS-1 Sensitization - Skin: Category 1 AH1 Aspiration Hazard: Category 1 SE-3NARC STOT Single Exposure Category 3 (narcotic) FL4 Flammable Liquids: Category 4
Signal Word (s)	DANGER
Hazard Statement (s)	H351 Suspected of causing cancer. H317 May cause an allergic skin reaction. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness. AUH066 Repeated exposure may cause skin dryness or cracking. H410 Very toxic to aquatic life with long lasting effects.
General Precautionary Statement (s)	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
Pictogram (s)	Health hazard, Exclamation mark, Environment, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention	P281 Use personal protective equipment as required. P261 Avoid breathing vapours or spray. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, clothing, eye and face protection. P271 Use only outdoors or in a well-ventilated area.
Precautionary statement – Response	P308+P313 IF EXPOSED OR CONCERNED: Get medical advice/attention. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P363 Wash contaminated clothing before reuse. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331 Do NOT induce vomiting. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell.
Other Information	Poisons Schedule S5

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3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Trifluralin	1582-09-8	480 g/L
	Liquid Hydrocarbon	64742-94-5	499g/L or 557g/L
	Dispersants	N/A	<10%
Other Information	di-n-propylnitrosamine < 0.5ppm		

4. First-aid measures

Inhalation	Remove affected person to fresh air until recovered. Apply CPR if there is no breathing and NO pulse.
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.
Skin	Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
Eye contact	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
First Aid Facilities	If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
Advice to Doctor	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.
Hazards from Combustion	If involved in a fire, it will emit hydrogen fluoride, oxides of nitrogen and possibly cyanides.
Special Protective Equipment for fire fighters	Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.
Other Information	STOP 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 spilled material and waste in sealable open-top type containers for disposal.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers.

7. Handling and storage

Conditions for safe storage, including any incompatibilities	Store in the closed, original container in a dry, well ventilated area out of direct sunlight. Do not store near oxidisers. Do not store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals re-dissolve. Ensure any crystals are dissolved before adding to the spray tank.
Tank Cleaning	See label for detailed information on cleaning/decontaminating of spray equipment. The addition of Tank and Equipment Cleaner will assist the cleaning process.
Other Information	Always read the label and any attached leaflet before use.

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8. Exposure controls/personal protection

Occupational exposure limit values	No exposure standards have been set for this product or the active ingredients. The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m ³ ; 15ppm TWA, as total hydrocarbon.
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Respiratory Protection	Do not inhale spray mist.
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. Sensitive workers should use protective clothing.
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.
Requirements Concerning Special Training	Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. Physical and chemical properties

Form	Liquid
Appearance	Bright orange, clear liquid
Odour	Solvent odour
Melting Point	Some crystallisation occurs between 0 and -7°C
Boiling Point	183-210°C (for solvent)
Solubility in Water	Disperses in water.
Specific Gravity	1.116
pH	7.5 - 8.5
Vapour Pressure	0.5 kPa @ 38°C for solvent, 13.7 mPa @ 25°C for trifluralin
Vapour Density (Air=1)	4.8 (solvent)
Volatile Component	51% v/v
Flash Point	72.5°C
Flammability	Combustible liquid C1. (does not sustain combustion) AS1940. Combustible Liquid (GHS).
Auto-Ignition Temperature	443°C (solvent)
Flammable Limits - Lower	0.9% (for solvent)
Flammable Limits - Upper	6% (for solvent)

10. Stability and reactivity

Chemical Stability	Stable under normal conditions. Do not store below 5°C.
Incompatible Materials	Prolonged reaction with water can cause slow decomposition and the formation of acid which may attack drums. If a part open drum is to be stored, ensure that no water has been added to the drum.
Possibility of hazardous reactions	Violent reactions between this product and oxidising agents are possible.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. Toxicological Information

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Toxicology Information	No harmful effects are expected if the precautions on the label and this MSDS are followed. Nufarm trifluralin (technical) is manufactured to comply with a maximum limit of 0.5ppm di-n-propyl nitrosamine, generally, the levels are not detectable at a detection limit of 0.2ppm. The final product specification is set in accordance with the current FAO specification of max 0.5ppm di-n-propyl nitrosamine.
Acute Toxicity - Oral	LD50 (rat) >10,000 mg/kg for trifluralin LD50 (mouse) 5,000 mg/kg for trifluralin In 2 year feeding trials, rats receiving 2,000 mg/kg diet suffered no ill effects. In 2 year feeding trials, dogs receiving 1,000 mg/kg body weight suffered no ill effects.
Ingestion	The concentrate is of low toxicity if swallowed. However, swallowing of large amounts may cause injury, mainly due to the solvent. If aspirated into the lung, e.g. from vomiting, the presence of the solvent may result in chemical pneumonitis or other lung damage.
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, can be anaesthetic 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. May cause sensitisation by prolonged skin contact.
Eye	The concentrate may cause irritation of the eyes.
Carcinogenicity	The active ingredient trifluralin, and an impurity present in the solvent naphthalene have been found to cause tumors in laboratory animals and are classified as suspected human carcinogens.
Other Information	The Australian Acceptable Daily Intake (ADI) for trifluralin for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 2.5 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', December 2015).

12. Ecological information

Persistence and degradability	Trifluralin degrades in soil at a relatively moderate rate, about 85 - 90% of the material is lost in normal soil in 1/2 to 1 year.
Other Precautions	Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.
Environmental Protection	Marine pollutant. Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	The following is data for the active ingredient, trifluralin. LC50 (96hr) for young rainbow trout is 0.088 mg/l. LC50 (96hr) for young bluegill sunfish is 0.089 mg/l.
Acute Toxicity - Daphnia	LC50 (48hr) for daphnia is 0.245 mg/l.
Acute Toxicity - Other Organisms	Birds: Not toxic to birds. LD50 for bobwhite quail is >2,000 mg/kg Bees: Not toxic to bees. LD50 >100 µg/bee.

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 (ChemClear®).
Container Disposal	Do not use this container for any other purpose. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill.

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If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

Empty containers and product should not be burnt.

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.

Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.

14. Transport information

Transport Information Storage and Transport	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs. Considered non dangerous for road and rail transport (in packaging, including IBCs not greater than 3000 Lt each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.
UN Number (Sea Transport)	For bulk shipments as Class 9, use UN 3082, HazChem code 2Z. 3082
IMO Class/Packing Group	Class 9; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Trifluralin)

15. Regulatory information

Regulatory Information	WHS Schedule 11, item 10 (flammable liquid category 4)
Poisons Schedule	S5
Packaging & Labelling	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Other Information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 56421.

16. Other Information

Date of preparation or last revision of SDS	Revised 01/07/2016 This SDS replaces document dated September 2015.
Contact Person/Point	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted	The SDS was reviewed. Various changes were made to the information. ...End Of MSDS...

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