

Infosafe No™ 3NUZB	Issue Date : January 2019	ISSUED by NUFARM
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 Product Name **Grando 600 Herbicide**

Classified as hazardous

## 1. Identification

<b>GHS Product Identifier</b>	Grando 600 Herbicide
<b>Product Code</b>	0510
<b>Product Type</b>	Group I Herbicide
<b>Company Name</b>	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
<b>Address</b>	103-105 Pipe Road Laverton North Victoria 3026 Australia
<b>Telephone/Fax Number</b>	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001
<b>Emergency phone number</b>	1800 033 498 (24hr Australia)
<b>Recommended use of the chemical and restrictions on use</b>	For the control of various woody and broadleaf weeds as specified in the Directions for Use table on the label.
<b>Other Information</b>	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

<b>GHS classification of the substance/mixture</b>	OT4 Acute Toxicity - Oral: Category 4 SS-1 Sensitization - Skin: Category 1 ED2A Eye Damage/Irritation: Category 2A AA1 Hazardous to the Aquatic Environment - Acute Hazard: Category 1
<b>Signal Word (s)</b>	WARNING
<b>Hazard Statement (s)</b>	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H400 Very toxic to aquatic life.
<b>General Precautionary Statement (s)</b>	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children.
<b>Pictogram (s)</b>	P103 Read label before use. Exclamation mark, Environment, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



<b>Precautionary statement – Prevention</b>	P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves, clothing, eye and face protection.
<b>Precautionary statement – Response</b>	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P330 Rinse mouth. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
<b>Other Information</b>	Poisons Schedule S6

## 3. Composition/information on ingredients

<b>Chemical Characterization</b>	Liquid		
<b>Ingredients</b>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Triclopyr (present as the butoxyethyl ester)	64700-56-7	600 g/L

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Butyl diglycol	112-34-5	10-30 %
Other non-hazardous ingredients		Balance

#### 4. First-aid measures

**Inhalation** Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.

**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** Remove contaminated clothing and launder before re-use.  
Wash affected areas thoroughly with soap and water.  
Seek medical advice, but only after the exposed skin has been thoroughly washed.

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

**First Aid Facilities** If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

**Advice to Doctor** Treat symptomatically.

#### 5. Fire-fighting measures

**Suitable extinguishing media** Water fog, foam, carbon dioxide or dry chemical.

**Hazards from Combustion Products** If involved in a fire, it will emit oxides of carbon, oxides of nitrogen, hydrogen chloride and possibly phosgene.

**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.

#### 7. Handling and storage

**Precautions for Safe Handling** Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.

**Conditions for safe storage, including any incompatibilities** Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight.  
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

**Tank Cleaning** See label for detailed information on cleaning of spray equipment.

**Other Information** Always read the label and any attached leaflet before use.

#### 8. Exposure controls/personal protection

**Other Exposure Information** EU. exposure standards for triclopyr are TWA 67.5mg/m<sup>3</sup>, STEL 101.2 mg/m<sup>3</sup>.

**Appropriate engineering controls** Handle in well ventilated areas, generally natural ventilation is adequate.

**Personal Protective Equipment** It is good practice to wear suitable personal protective equipment (PPE).  
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.

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<b>Hygiene Measures</b>	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
<b>Requirements Concerning Special Training</b>	After each day's use, wash contaminated clothing and safety equipment. 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

<b>Form</b>	Liquid
<b>Appearance</b>	Amber liquid
<b>Solubility in Water</b>	Disperses in water.
<b>Specific Gravity</b>	1.21
<b>pH</b>	4-6 (1% in water)
<b>Vapour Pressure</b>	0.48 mPa (triclopyr butoxyethyl ester)
<b>Flash Point</b>	95°C
<b>Flammability</b>	Combustible liquid C2. (AS1940 - 2017). A C2 combustible liquid is not a combustible liquid within the meaning of the Australian Code for the Transport of Dangerous Goods by Road & Rail.

## 10. Stability and reactivity

<b>Chemical Stability</b>	Stable under normal conditions.
<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.

## 11. Toxicological Information

<b>Toxicology Information</b>	No harmful effects are expected if the precautions on the label and this MSDS are followed.
<b>Acute Toxicity - Oral</b>	LD50 (rat) 803 mg/kg for triclopyr butoxyethyl ester
<b>Acute Toxicity - Dermal</b>	LD50 (rabbit) >2000 mg/kg for triclopyr butoxyethyl ester
<b>Acute Toxicity - Inhalation</b>	LC50 (rat) (4hr) >4.8 mg/l for triclopyr butoxyethyl ester
<b>Ingestion</b>	Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
<b>Inhalation</b>	High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract.
<b>Skin</b>	May irritate the skin.
<b>Eye</b>	May cause sensitisation by prolonged skin contact.
<b>Skin Sensitisation</b>	Will irritate the eyes.
<b>Carcinogenicity</b>	Prolonged and repeated skin contact may result in skin sensitisation.
<b>Chronic Effects</b>	Triclopyr has been assessed in animals and some data exists that triclopyr is a substance which causes some concern for humans owing to possible carcinogenic effects from long term exposure, but in respect of which the available information is not adequate for making a satisfactory assessment. Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
<b>Serious eye damage/irritation</b>	Moderate eye irritant.
<b>Mutagenicity</b>	Data indicates no mutagenic effects.
<b>Skin corrosion/irritation</b>	Mild to moderate skin irritant.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for triclopyr for a human is 0.005 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.5 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: Aust Govt Dept. of APVMA, 'ADI List', June 2018).

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## 12. Ecological information

<b>Persistence and degradability</b>	Triclopyr butoxyethyl ester is rapidly hydrolysed to triclopyr acid in soil and water. Triclopyr acid is degraded by microbial action and photodecomposition. Triclopyr acid, in soil, has a half-life of approximately forty days, depending on soil and climatic conditions. In water, triclopyr acid will decompose rapidly with a half-life of one to two days. Minimal leaching of triclopyr acid may occur in light soils under high rainfall conditions. Contamination of ground water by triclopyr is highly unlikely. If used according to the label, Grando 600 will not be harmful to the environment.
<b>Other Precautions</b>	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
<b>Environmental Protection</b>	Spray drift can cause damage, read the label for more information. Marine pollutant.
<b>Acute Toxicity - Fish</b>	The following is data for the active ingredient, triclopyr as the butoxyethyl ester. LC50 (96hr) for the most sensitive species tested is 0.31 mg/l. LC50 (48hr) for daphnia is 0.66 mg/l for triclopyr butoxyethyl ester.
<b>Acute Toxicity - Daphnia</b>	
<b>Acute Toxicity - Algae</b>	EC50 (48hr) for algae is 0.193 mg/l.
<b>Acute Toxicity - Other Organisms</b>	Bees: Not toxic to bees. LD50 >100 µg/bee. LD50 for bobwhite quail is 735 mg/kg for triclopyr butoxyethyl ester

## 13. Disposal considerations

<b>Product Disposal</b>	DO NOT dispose of undiluted chemicals on site. 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®).
<b>Container Disposal</b>	Do not use this container for any other purpose. Triple or preferably pressure rinse inner bladder or 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, break, crush or puncture and deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government 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. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage. DO NOT burn empty containers or product.

## 14. Transport information

<b>Transport Information</b>	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
<b>Storage and Transport</b>	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.
<b>UN Number (Sea Transport)</b>	For bulk shipments as Class 9, use UN 3082, HazChem code 2Z. UN 3082
<b>IMO Class/Packing Group</b>	Class 9; Packing Group III

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<b>IMO Marine Pollutant</b>	Marine Pollutant
<b>IMO Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Triclopyr butoxyethyl ester)

## 15. Regulatory information

<b>Regulatory Information</b>	Australia: WHS regulations (2011) - Schedule 11: classification not listed.
<b>Poisons Schedule</b>	S6
<b>Packaging &amp; Labelling</b>	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
<b>Other Information</b>	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 59202.

## 16. Other Information

<b>Date of preparation or last revision of SDS</b>	Revised 10/01/2019 This SDS replaces document dated June 2017
<b>Literature References</b>	EFSA Scientific Report (2005) 56, 1-103 conclusion on the peer review of triclopyr
<b>Contact Person/Point</b>	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
<b>Revisions Highlighted</b>	The SDS was reviewed. Minor changes were made to the information. Flammability classification amended in section 9. ...End Of MSDS...

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