MATERIAL SAFETY DATA SHEET

Rygel Triclopyr 600 Herbicide

1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Supplier: Rygel Australia Pty Ltd
ACN: 106 839 007
Street Address: 103 Ordish Road, Dandenong South, Vic 3175
Telephone: (03) 9768 2803
Facsimile: (03) 9768 2804
Emergency telephone number: National Poisons Information Centre: Phone Australia 13 11 26.

Product name: Rygel Triclopyr 600 Herbicide
Product Type Group I Herbicide
Product Use: For the control of various woody and broadleaf weeds.

2. HAZARDS IDENTIFICATION

Hazard Classification
HAZARDOUS SUBSTANCE (Hazard classification according to the criteria of NOHSC).
NON-DANGEROUS GOODS (Dangerous goods classification according to the Australia Dangerous Goods Code).
Risk Phrase(s)
R22 Harmful if swallowed.
R36 Irritating to eyes.
R43 May cause sensitisation by skin contact.
Safety Phrase(s)
S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S24/25 Avoid contact with skin and eyes.
S46 If swallowed, seek medical advice immediately and show this container or label.
Other Information Poisons Schedule S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc,%	TWA (mg/m^3)	STEL (mg/m^3)
Triclopyr (as butoxyethyl ester)	64700-56-7	600g/L	not set	not set
Hydrocarbon liquid	8008-20-6	10-30	not set	not set
Ethyl di icinol	111-90-0	<10	not set	not set
2-Butoxyethanol	111-76-2	<10	121	not set
Other non-hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

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.
The above first aid instructions are mandated by the Commonwealth Department of Health and Aged Care via the National Drugs and Poisons Schedule. These instructions are suitable for ingestion of spray solution and small amounts of concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about 10ml) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being

inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.
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 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.
Specific Hazards
Hazchem Code 2X
Emergency Action in case of Fire
If exposed to fire, keep container cool by spraying with water.
If possible, remove other containers from the area of fire.
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
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

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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Appearance	Amber liquid
Solubility in Water	Disperses in water

Specific Gravity	1.21
Vapour Pressure	0.48 mPa (triclopyr butoxyethyl ester)
Flash Point	95°C
Flammability	Combustible C1

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions
Hazardous Polymerisation	Hazardous polymerisation is not possible

11. TOXICOLOGICAL INFORMATION

Toxicology Information
No harmful effects are expected if the precautions on the label and this MSDS are followed.
Inhalation High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract.
Ingestion Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
Skin May irritate the skin. May cause sensitisation by prolonged skin contact.
Eye Will irritate the eyes.
Chronic Effects Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Mutagenicity Data indicates no mutagenic effects.
Carcinogenicity 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.
Acute Toxicity - Oral LD50 (rat) 803 mg/kg for triclopyr butoxyethyl ester
Acute Toxicity - Dermal
LD50 (rabbit) >2,000 mg/kg for triclopyr butoxyethyl ester
Acute Toxicity - Inhalation
LC50 (rat) (4hr) >4.8 mg/L for triclopyr butoxyethyl ester
Eye Irritation Moderate eye irritant.
Skin Irritation Mild to moderate skin irritant.
Skin Sensitisation Prolonged and repeated skin contact may result in skin sensitisation.
Other Information 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: Comm. Dept. of Health and Ageing, 'ADI List', TGA, June 2006).

12. ECOLOGICAL INFORMATION

Persistence / Degradability
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, Triclopyr 600 will not be harmful to the environment.
Other Precautions Do not contaminate dams, waterways or sewers with this product or the containers, which have held this product.
Environ. Protection Spray drift can cause damage, read the label for more information. Marine pollutant.
Acute Toxicity - Fish The following is data for the active ingredient, triclopyr as the butoxyethyl ester.
LC50 (96 hr) for the most sensitive species tested is 0.31 mg/L.
Acute Toxicity - Daphnia
LC50 (48 hr) for daphnia is 0.66 mg/L for triclopyr butoxyethyl ester.
Acute Toxicity - Algae
EC50 (48hr) for algae is 0.193 mg/L.

Acute Toxicity - Other Organisms
Bees: Not toxic to bees. LD50 >100 µg/bee.
LD50 for bobwhite quail is 735 mg/kg for triclopyr butoxyethyl ester

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 rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local 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.
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.

14. TRANSPORT INFORMATION

U.N. Number	None Allocated
Proper Shipping Name	None Allocated
DG Class	None Allocated
Hazchem Code	2X
Packing Group	None Allocated
Storage and Transport	Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.
UN Number (Sea Transport)	3082
IMO Class/Packing Group	Class 9
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Triclopyr)

15. REGULATORY INFORMATION

Packaging & Labelling
POISON
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category Harmful, Irritant
AICS (Australia) All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

All information contained in this document is as accurate as possible based on information submitted by raw material suppliers. **Rygel Australia Pty Ltd** will not be responsible for any damages that may result from reliance on the information contained herein.

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