



# GRASSMATE Herbicide

## 1. PRODUCT & COMPANY IDENTIFICATION

Product Identification: Grassmate  
Product Use: Herbicide  
Company Identification: Rainbow & Brown Limited  
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Date of Issue: July 2015

## 2. HAZARDS IDENTIFICATION

Classified under the HSNO Act as:

- 6.1D Harmful if swallowed
- 6.3B Irritating to skin
- 6.4A Irritating to eyes
- 6.5B May cause sensitisation by skin contact
- 6.9B Danger of serious damage to health by prolonged exposure
- 9.1A Very toxic to aquatic organisms
- 9.2A Very toxic in the soil
- 9.3C Harmful to terrestrial vertebrates

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<i>Ingredient</i>	<i>CAS Number</i>	<i>Proportion</i>
• Triclopyr (present as the butoxyethyl ester)	64700-56-7	30%
• Picloram (present as the hexyloxypropylamine salt)	1918-02-1	10%
• Diethylene glycol mono-butyl ether	112-34-5	40%
• Other ingredients not contributing to hazard	-	20%

#### 4. FIRST AID MEASURES

Eyes:	Flush with cold water immediately for at least 15 minutes. Seek medical advice.
Skin:	Wash skin well with soap and water. Wash contaminated clothing before re-use.
Ingestion:	Contact a doctor or Poisons Information Centre (0800 POISON – 0800 764 766). Do not induce vomiting or give liquid (beyond washing out mouth) unless instructed to do so following medical advice.
Inhalation:	If ill-effects occur, move to fresh air. If ill-effects persist seek medical attention.
Advice to Doctor:	No specific antidote. Treat symptomatically. If lavage is performed, suggest endotracheal or esophageal control. Damage from lung aspiration must be weighed against toxicity when considering emptying of stomach.

#### 5. FIRE FIGHTING MEASURES

Flash Point:	>110°C
Flammable Limits:	Not determined.
Extinguishing Media:	Water spray, dry chemical, foam, CO <sub>2</sub>
Fire & Explosion Hazards:	Toxic fumes and irritating vapours can be produced if active ingredients decompose in a fire. Eruption of containers is likely at very high temperatures. Intact containers should be cooled with water to reduce pressure.
Fire Fighting Equipment:	Use self-contained breathing apparatus and chemical-protective clothing including neoprene or rubber boots and gloves.
Fire Fighting Instructions:	Addition of water may cause excessive foaming. Do not allow contaminated water runoff to enter drains or waterways.
HAZCHEM:	2X

#### 6. ACCIDENTAL RELEASE MEASURES

Spills:	Use appropriate protective clothing and equipment including neoprene or rubber boots and gloves. Prevent further leakage. Absorb spilled liquid with clay, sand or other absorbent material and sweep to a waste container for disposal. DO NOT use water for cleanup unless it can be entirely contained and absorbed for disposal. Spills may be slippery and should be cleaned up promptly.
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## 7. HANDLING AND STORAGE

Handling:	Read the storage/handling precautions on the product label. Avoid eye, skin & clothing contact. Avoid inhaling vapour, dust or spray mist. After work, remove protective clothing and equipment, wash hands before eating, drinking, smoking or using toilet. Wash clothing after use.
Storage:	Store in tightly closed original container in a cool, dry, well-ventilated and secure area when not in use. Do not store with food, feedstuffs, seed or fertilisers. Keep out of reach of children.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Guidelines:	Picloram acid OSH WES 10mg/m <sup>3</sup> Triclopyr acid (Dow) 2mg/m <sup>3</sup> , skin.
Engineering Controls:	Use only with adequate ventilation.
Respiratory Protection:	No special precautions are necessary for respiratory protection under normal handling conditions. When exposed to vapours from heated material, use respirator with organic vapour canister or self-contained breathing apparatus.
Skin Protection:	Wear overalls and gloves while mixing or spraying.
Eye Protection:	Wear face shield/goggles while mixing or spraying.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light amber liquid
Odour:	Mild ester
Boiling Point:	c. 200°C
Specific Gravity:	1.125g/ml @ 20°C
pH:	6.5-8.0 (5% solution)
Vapour Pressure:	3.6 x 10 <sup>-6</sup> Pa @ 25°C for Triclopyr BEE 6.16 x 10 <sup>-7</sup> Pa @ 25°C for Picloram acid
Solubility in water:	Emulsifiable

## 10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Incompatibility:	None under normal use conditions. Under abnormal conditions, avoid oxidisers and strong acids.
Hazardous Decomposition Products:	Hazardous Decomposition Hydrogen chloride and nitrogen oxides in fire.
Hazardous Polymerization:	Not known to occur.

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## 11. TOXOLOGICAL INFORMATION

Eye:	May cause moderate eye irritation. Corneal injury is unlikely. Effects are likely to heal readily.
Skin:	Prolonged contact may cause skin irritation. Repeated prolonged exposure may cause allergic skin reactions in some individuals.
Ingestion:	Dermal LD50 (rabbit) >2000mg/kg Low toxicity if swallowed. Aspiration into lungs may occur during ingestion or vomiting causing lung damage or even death due to chemical pneumonia. LD50 (rat) 2525mg/kg (female) and 3383mg/kg (male)
Inhalation:	Excessive exposure may be irritating to upper respiratory tract. Aerosol LC50 (rat) >5.0mg/L for 4 hours.
Systemic (other organ) Effects:	In animals, effects have been reported on liver, kidneys and blood. Symptoms of excessive exposure may be anesthetic or narcotic effects. Dizziness or drowsiness may be observed.
Cancer Information :	Active ingredients are not carcinogenic in laboratory animals.
Teratology:	The active ingredients did not cause birth defects in laboratory animals. Has been toxic to fetus in laboratory animals at doses toxic to the mother.
Reproductive Effects:	Effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Mutagenicity:	In-vitro and animal genetic toxicity studies negative.

## 12. ECOLOGICAL INFORMATION

Environmental Fate:	(Based largely or completely on information for the active ingredients)
Movement & partitioning:	Bioconcentration potential moderate BCF between 100 and 3000 or Log Pow between 3 and 5.

(cont)

Degradation & persistence:  
Not readily biodegradable (OECD test) but biodegradable under environmental conditions.

Ecotoxicity: (Based largely or completely on information for the active ingredients)  
Highly toxic to aquatic organisms on an acute basis (LC50 or EC50 between 0.1 and 1.0 mg/L in the most sensitive species tested).  
Highly toxic to plants.  
Harmful to birds or mammals (triclopyr LD50 bird 735mg/kg in the most sensitive species tested).

ERMA classifies this product as 9.1A, 9.2A & 9.3C.

### 13. DISPOSAL CONSIDERATIONS

Disposal Method: Follow the label directions.  
Triple rinse empty containers before disposal.  
Do not burn empty containers that have not been rinsed. Burn in an appropriate incinerator if circumstances such as wind direction permit.  
Otherwise crush or puncture and bury in a suitably approved landfill. Do not dispose of this product down drains or sewers. Follow all local, regional and national laws and regulations regarding hazardous waste disposal.

### 14. TRANSPORT INFORMATION

Dangerous Goods Classification:

Shipping Name: Environmentally hazardous substance, solid NOS (triclopyr, picloram)  
Class: 9  
UN Number: 3082  
Packaging group: III

## 15. REGULATORY INFORMATION

ACVM Registration No:	P7417
ERMA Approval No:	HSR06051
Approved Handler:	Approved Handler certification is NOT required to purchase, handle or apply this product, unless applied in wide dispersive manner, applied over water, or applied by a commercial contractor.
Tracking:	Not required.

## 16. OTHER INFORMATION

### Glossary

AEL	Acceptable Exposure Limit
DT <sub>50</sub>	Time (days) for 50% loss
EC <sub>50</sub>	Median effective concentration
EEL	Environmental Exposure Limit
ERMA	Environmental Risk Management Authority
HSNO	Hazardous Substances & New Organisms Act
Koc	Organic carbon partition coefficient (ml soil water/g organic carbon)
LFL	Lower Flammability Limit
LC <sub>50</sub>	Lethal Concentration in air or water for 50% of test organisms
LD <sub>50</sub>	Lethal Dose for 50% of test organisms
NOEL	No Observable Effect Level
OSHA	Occupational Safety & Health Administration (USA)
OSH	Occupational Safety & Health service (NZ)
PEL	Permissible Exposure Level
Pow	Octanol water partition coefficient (ratio of concentration of a chemical in octanol and water at equilibrium and at a specified temp.)
pH	Measure of acidity/alkalinity of a substance on a 1-14 scale (1=strong acid, 14 = strongly alkali)
STEL	Short Term Exposure Limit
TEL	Tolerable Exposure Limit
TLV	Threshold Limit Value – an exposure limit set by a competent authority
TWA	Time Weighted Average – average concentration of a chemical in air over a total exposure time (usually 8 hours)
UFL	Upper Flammability Limit
WES	Workplace Exposure Standard – set by ERMA/OSH

The data in this Safety Data Sheet relates only to this product alone, and not to its use in combination with other substances or products. In such circumstances, assuming the combination is permitted (refer to product labels, and contact manufacturers if in doubt), be guided by the most hazardous of the substances involved, and observe the more stringent of all hazard controls applicable to the products used.

Further Information:        Rainbow & Brown Limited  
                                     Toll-Free Phone (0508) 299 299

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