



TRIUMPH BRUSHKILLER SAFETY DATA SHEET

1: Identification of the Substance and Supplier

Product Name:	TRIUMPH BRUSHKILLER
Recommended Use:	Herbicide
Company Details:	Orion Crop Protection Ltd 14 – 22 Triton Drive, North Harbour, Auckland PO Box 100 570, North Shore Mail Centre New Zealand
Telephone Number:	(09) 415 1679 (office hours)
Emergency Telephone:	0800 CHEMCALL (0800 243 622) (24 hours)
National Poison Centre:	0800 POISON (0800 764 766) (24 hours)
Date of Preparation:	October 2006
Date of Revision:	

2: Hazards Identification

Priority Identifiers:	Combustible Liquid, Harmful, Ecotoxic, Keep Out of Reach of Children
HSNO Classes:	Secondary Identifiers:
3.1D	Combustible liquid
6.1D	May be harmful if swallowed, inhaled or absorbed through the skin
6.3B	May cause mild skin irritation
6.4A	May cause eye irritation
6.5B	May cause sensitization from prolonged skin contact
6.9B	May cause organ damage from repeated oral exposure at high doses
9.1A	Very toxic to aquatic organisms
9.2A	Very toxic to some plant species
9.3C	Harmful to terrestrial vertebrates

3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Triclopyr butoxyethyl ester (active ingredient)	64700-56-7	42
Picloram amine salt	1918-02-1	17
Other ingredients, solvents, surfactants, etc	Proprietary	Remainder

4: First Aid Measures

Skin Contact:	In case of contact, immediately wash affected area with soap and water. Seek medical advice if irritation persists. Wash contaminated clothing before reuse.
Eye Contact:	Hold eyes open and rinse with water for at least 15 minutes. Remove contact lenses if easy to do so. Seek medical advice.
Ingestion:	Do not induce vomiting. Seek medical advice immediately.
Inhalation:	Immediately move to fresh air and rest. Maintain half upright position if breathing is difficult. Seek medical advice immediately.
Workplace Facilities:	Hand wash facility. Eye wash facility.
Advice to Doctor:	No specific antidote. Treat symptomatically. If gastric lavage or emesis is considered necessary, use a method least likely to result in aspiration of solvents, e.g., use endotracheal intubation.
National Poison Centre:	0800 POISON (0800 764 766) (24 hours)

5: Fire-Fighting Measures

Fire/Explosion Hazard:	Combustible liquid
HAZCHEM Code:	2X
ERP Guide No:	47
Extinguishing Media:	Water spray, foam, dry chemical or C02. Avoid water jet.
Fire Fighting Instructions:	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.

6: Accidental Release Measures

Caution: Floors may be slippery if wet. Eliminate all ignition sources and naked lights. Use non-sparking equipment. Leave and/or avoid entering confined spaces. When dealing with spills wear personal protective clothing and equipment as described in section 8. Prevent further spillage or leakage. Keep bystanders away. Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to an approved landfill.

7: Storage, Handling and Use

Storage:	Keep out of reach of children. Do not store near heat, flame or other source of ignition. Store in the original, tightly closed container, in a secure and well ventilated area away from feed or foodstuffs.
Handling and Use:	Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapour or spray mist. Avoid handling, mixing or use of the product or container near heat, flame or other source of ignition. When mixing, using or applying, wear protective clothing as described in section 8. Do not eat, drink or smoke while using. Wash hands and face after use. Wash protective clothing after use.
Approved Handler	Required if applied in a wide dispersive manner, or by a commercial contractor.
Tracking	Not required.
Record Keeping	Record of use must be kept if 3 litres or more is used in an area within 24 hours, and is likely to enter air or water and leave that place.
Site Requirements under the HSNO Act 1996 and	<ul style="list-style-type: none">• A location test certificate is not required• A hazardous atmosphere zone is not required

HSNO Regulations:	<ul style="list-style-type: none"> • Fire extinguishers are required for more than 500 litres (2 fire extinguishers) • Signage is required for 100 litres or more • Emergency information is required for 0.1 litre or more • An emergency plan is required for more than 100 litres • Secondary containment is required for more than 100 litres • Separation/Segregation from incompatible substances (classes 1, 2, 3.2, 4 and 5) is required.
Additional Requirements	All aspects of storage, handling, use, disposal and record keeping must be in accordance with NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans.

8: Exposure Control / Personal Protection

Tolerable Exposure Limit:	None established.
Workplace Exposure Standards:	Product – None established (Use lowest practicable level). Active ingredients – Picloram 10 mg/m ³ (8 hr TWA). Others – None established (Use lowest practicable level). Excipients – None established (Use lowest practicable level).
Engineering Controls:	Not practicable given nature of use.
Personal Protection:	
Eye:	Safety glasses/goggles (or full face respirator incorporating visor) when mixing or applying.
Skin:	Cotton overalls snugly fitting at the neck, wrist and ankle, chemical resistant boots and gloves (barrier multilayer, nitrile, neoprene).
Respiratory:	Not required where vapour or spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

9: Physical and Chemical Properties

Form:	Liquid
Colour:	Amber
Odour:	Non-specific
Boiling Point:	Not available
Flash Point:	87°C
Auto ignition Temperature:	Not available
Explosive Limits:	Not available. Undiluted product may form explosive mixture in enclosed or poorly ventilated areas (if container not kept tightly closed).
Density:	1.20 g/ml (approx)
Vapour Pressure:	Not available
Vapour Density:	> 1 (heavier than air)
Solubility in Water:	Emulsifiable
pH:	3.0 – 7.0 (1% emulsion)
Oxidising Properties:	Not an oxidizer
Corrosive Properties:	Not a corrosive

10: Stability and Reactivity

Stability:	Stable under normal conditions.
Incompatibility:	Avoid mixing with strong acids, alkalis, and oxidizing agents such as

Decomposition:	chlorine compounds, ammonium nitrate, etc.
Dangerous Reactions:	Decomposition will not occur under normal conditions. Products arising from combustion or thermal decomposition may be toxic, corrosive or flammable.

11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet.

Swallowed:	Nausea, vomiting, diarrhea and gastrointestinal discomfort. The solvent in this product may cause bronchopneumonia or pulmonary oedema if aspirated into the lungs from ingestion or from vomiting.
Eye:	Irritation.
Skin:	Mild irritation. Prolonged or repeated contact may result in degreasing of the skin and dermatitis. Contact may induce an allergic response in susceptible individuals.
Inhalation:	Irritation, headache, dizziness, nausea, drowsiness.
Acute Toxicity: (Active Ingredients)	Triclopyr butoxyethyl ester Acute Oral LD50 (Rat) 803 mg/kg Picloram Acute Oral LD50 (Mice) 2000 mg/kg Acute Percutaneous LD50 (Rabbit) >2000 mg/kg Inhalation LC50 (4 hr) (Rat) > 0.035 mg/l
Sensitisation Effects:	Skin sensitisation (allergy) may occur in some individuals
Mutagenic Effects:	None
Carcinogenic Effects:	None
Reproductive Effects:	None
Teratogenic (Birth) Effects:	None.
Systemic Effects:	Long term animal feeding studies on triclopyr and picloram at high doses have found to be damaging to the liver and kidneys.

12: Ecotoxicity Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet.

The following information is presented in respect of the active ingredients:

Ecotoxic Effects:	Triclopyr butoxyethyl ester LD50 (21 day) (Bobwhite quail) 735 mg/kg LC50 (96 hr) (Fish) 2.8 µg/l EC50 (24 hr) (Algae) 0.1 mg/l Very toxic to some plant species (selective herbicide) Non - toxic to bees. Picloram Acute Oral LD50 (Chicks) 6000 mg/kg LC50 (96 hr) (Rainbow trout) 5.5 mg/l LC50 (48 hr) (Daphnia) 34.4 mg/l EC50 (Algae) 36.9 mg/l Non-toxic to bees
Environmental Fate:	Biodegradable. DT50 (soil) 30 - 90 days (triclopyr) Biodegradable. DT50 (soil) 30 - 90 days (picloram)
Partition Co-Efficient (Kow):	LogP = 4.01 (moderate) (triclopyr) LogP = 0.15 (low) (picloram)
Environmental Exposure Limit:	None established.

13: Disposal Considerations

Product: Dispose of product by using it in accordance with the label. Do not burn. Waste product should be disposed of to an approved landfill. For disposal of large quantities contact Orion Crop Protection Ltd.

Container: Dispose of to an approved landfill or agricultural recycling scheme. Do not burn. Do not use packaging for any other purpose.

14: Transport Information

Dangerous Goods:

UN Number: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRICLOPYR ESTER 42%, PICLORAM AMINE 17%)

Class: 9

Subsidiary Class: None

Packing Group: III

Additional Information: MARINE POLLUTANT

Maximum Transport Quantity (Non-Commercial): 250 litres

Passenger Service Vehicle: Maximum quantity 0.1 litre

15: Regulatory Information

HSNO Approval No: HSR000553

ACVM Registration No: P7531

16: Other Information

Glossary

DT50	Time (days) for 50% reduction in concentration
EC50	Concentration required to produce an effect in 50% of organisms
Environmental Exposure Limit	Maximum concentration limit of a substance in an environmental medium, e.g., water, soil.
ERMA	Environmental Risk Management Authority
HSNO	Hazardous Substances and New Organisms
LC50	Concentration that will kill 50% of organisms
LD50	Dose that will kill 50% of organisms
Partition Co-Efficient Kow	Ratio of concentration between octanol and water. Values are given as the log value. A high value indicates a substance may bioaccumulate
Tolerable Exposure Limit	Maximum concentration limit of a substance above which persons must not be exposed
Workplace Exposure standard	An occupational health standard limiting concentrations of specified substances to which persons are exposed

Please Note

Users must ensure that the most up to date version of this safety data sheet is used. This Safety Data Sheet summarises information on this product, and how to safely handle and use

the product in the workplace. Each user should familiarise themselves with the product label, HazNote and SDS, and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products. Orion Crop Protection Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Always read the product label before use.