

MATERIAL SAFETY DATA SHEET



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STATEMENT OF HAZARDOUS NATURE

Hazardous according to criteria of National Occupational Health and Safety Commission.
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
R36/38 – Irritating to eyes and skin.

COMPANY DETAILS:

Company: Bayer CropScience Pty Ltd ABN 87 000 226 022
Address: 391 - 393 Tooronga Road, East Hawthorn, Victoria 3123
Australia
Telephone/Facsimile: (03) 9248 6888/(03) 9248 6800
Website Address: www.bayercropscience.com.au
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

IDENTIFICATION

Product Name:	Tigrex® Selective Herbicide
Other Names:	None given
Manufacturer's Product Code:	Not available
SAP Product Code:	17011 (5 L), 17008 (20 L), 17005 (100 L)
UN Number:	Not applicable
Dangerous Goods Class and Subsidiary Risk:	Not classified as dangerous goods for transport by road or rail
Hazchem Code:	Not applicable
Proper Shipping Name:	Not applicable
Packing Group:	Not applicable
EPG:	Not applicable
Chemical Family:	Phenoxy + nicotinamide
Poisons Schedule Number:	5
Use:	For use as an agricultural herbicide.

Physical Description/Properties

Appearance:	Clear dark brown liquid with distinctive strong ester odour
Boiling Point/Melting Point:	Boiling point 176° C (solvent)
Vapour Pressure:	Not determined
Density:	0.995 g/mL at 20° C
Flashpoint:	> 70° C
Flammability Limits:	UEL 0.6; LEL 7.0 in air
Solubility in Water:	Forms an emulsion
Formulation	Emulsifiable concentrate

Ingredients:

Chemical Name:	CAS Number:	Proportion g/L:
MCPA ethyl hexyl ester	[29450-45-1]	390 (≡ 250 MCPA)
Diflufenican	[83164-33-4]	25
Hydrocarbon solvent	[90438-79-2]	325
N-Methyl- 2-pyrrolidone	[872-50-4]	150
Other ingredients	(not hazardous)	105

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HEALTH HAZARD INFORMATION

- Health Effects:** *Note:* The ester form of MCPA is generally less toxic and irritating to mammals than MCPA (acid form).
- Acute:*
- Swallowed: Harmful if swallowed. Possible symptoms: nausea, vomiting, diarrhoea, burning of the oral mucosa, hypersalivation, stomach cramps.
- Eye: Will damage the eyes.
- Skin: Will irritate the skin. This product can be absorbed through the skin.
- Inhaled: May irritate mucous membranes of nose and mouth.
- Chronic:*
- The no observable effect level listed by the Therapeutic Goods Administration for diflufenican is 16.3 mg/kg bw/day. Diflufenican is not mutagenic, teratogenic or oncogenic. Prolonged or repeated contact with the solvent in this product may irritate the skin and cause dermatitis. In long term toxicity studies with MCPA (acid), at high doses the target organs were the liver, kidneys and skin.
- First Aid:** **If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.**
- Swallowed: Wash out mouth with water. Do NOT induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice as above. DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.
- Eye: Rinse immediately with clean water for at least 15 minutes and obtain medical aid.
- Skin: Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
- Inhaled: Remove victim to fresh air and keep at rest. Obtain medical advice if at all worried.
- First Aid Facilities: Ensure washing facilities are available.
- Advice to Doctor:** Additional toxic effects include headache, dizziness, convulsions, cerebral depression and mental confusion, with difficulty speaking, rapid and/or irregular pulse and low blood pressure. A short period

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of myotonia is followed by muscular weakness, a general reduction in motor activity, ataxia and incoordination with gradual loss of reflexes. No specific antidote known. Treat symptomatically. As this product contains a hydrocarbon solvent, care should be taken to prevent pulmonary aspiration. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

PRECAUTIONS FOR USE

- Exposure Standards:** PEL (Permissible Exposure Level) for diflufenican recommended by Bayer CropScience is 2.3 mg/m³. No exposure limits have been assigned to the other ingredients in Tigrex.
- Engineering Controls:** Control process conditions to avoid contact. Use in a well-ventilated area only. Consider local exhaust.
- Personal Protection:** Product is harmful if inhaled or swallowed. Will damage the eyes. Will irritate the skin. Avoid contact with eyes and skin.
- Eyes:** Face shield or goggles.
- Clothing:** Cotton overalls buttoned to the neck and wrist, and a washable hat.
- Gloves:** Elbow-length PVC gloves.
- Respiratory:** Do not breathe vapour or spray. Wear a respirator with an organic vapour cartridge if inhalation is likely.
- Other:** After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, safety goggles or face shield, respirator and contaminated clothing.
- Flammability:** Combustible liquid Class C1 – Flashpoint between 61 and 150° C.

SAFE HANDLING INFORMATION

Storage and

Transport:

- Corrosivity Hazards:** The rubber components present in some spraying units may be affected by exposure to the solvents in Tigrex.
- Handling & Storage Precautions:** Keep out of reach of children. Avoid contact with the eyes, skin and clothing and avoid inhalation of product or spray mist. If product in eyes, wash it out immediately with water. Do not smoke. Store in the closed, original container in a cool, well-ventilated area, out of direct sunlight. Store in locked room or place away from children, animals, food, feedstuffs, seed and fertilisers.

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SAFE HANDLING INFORMATION – continued

- Transport:** The product is not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail.
- Spills and Disposal:**
Spillage or Leak Procedures: Shut off all possible sources of ignition. DO NOT smoke. Avoid contact with the spilled material or contaminated surfaces. When dealing with spills wear personal protective clothing and equipment as described in the PERSONAL PROTECTION section above. Keep people and animals away and upwind. Contain spill and absorb with earth, sand, clay, or other absorbent material, collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.
- Waste Disposal Methods:** When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressure rinse them before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm 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. Dispose of waste product via a licensed disposal contractor to an approved landfill.
- Fire/Explosion Hazard:**
Extinguishing Media: Foam, carbon dioxide, water spray, dry agent
- Special Fire Fighting Procedures:** Combustible liquid. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715, 1716). Toxic decomposition products may be produced in a fire. If possible cool unopened containers by spraying with water. Containers may explode in a fire. Keep unnecessary people away. Bund area to prevent contamination of water sources. Dispose of fire control water and spillage later.
- Reactivity Hazards:** Stable under normal conditions of use. May produce an exothermic reaction with strong acids or alkalis. Avoid oxidisers, extreme heat and fire. Toxic compounds of chlorine and fluorine and oxides of carbon and nitrogen may be produced when heated to decomposition.

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OTHER INFORMATION:

Animal toxicity data:

(product)	Oral LD ₅₀ (mg/kg)	1580	Species	Rat
	Dermal LD ₅₀ (mg/kg)	> 2040	Species:	Rat
	Eye irritation	Slightly irritating	Species:	Rabbit
	Skin irritation	Slight to moderate irritant	Species:	Rabbit
	Sensitisation	*Sensitising	Species:	Guinea pig
(technical diflufenican)	Inhalation LC ₅₀ (mg/L)	> 2.34 air (4 h)	Species:	Rat
(technical MCPA 2-ethyl hexyl ester)	Inhalation LC ₅₀ (mg/L)	> 5.11 air (4 h)	Species:	Rat

* Although a similar product produced a sensitising reaction in this test, the individual components of Tigrex were not sensitisers in a similar test.

Environmental / Ecological Effects:

Note: The ester form of MCPA is generally less toxic to birds and mammals than the MCPA (acid form), but the ester form is more toxic to fish.

Dangerous to fish. Low hazard to bees.

Sprayed weeds may become more palatable to stock and a higher intake of some weeds may result in stock poisoning and death from causes such as nitrate poisoning.

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

MCPA:

LC₅₀ (96 h) (technical MCPA 2-ethyl hexyl ester) rainbow trout 3.2 mg/L

LC₅₀ (96 h) (technical MCPA) bobwhite quail 377 mg/kg

LC₅₀ (technical MCPA) Daphnia > 100 mg/L

Diflufenican:

LC₅₀ (96 h) rainbow trout 75 mg/L

LC₅₀ (96 h) carp 105 mg/L

Acute oral LD₅₀ quail > 2,150 mg/kg

Acute oral LD₅₀ mallard duck > 4,000 mg/kg

Special Precautions / Comments:

None

Data Sources / References:

Bayer CropScience product safety data and published data

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CONTACT POINT:

Emergency Contact Number: 1800 033 111 (Orica SH&E Shared Services)
Development Manager: (03) 9248 6888

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS 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.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

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