



## SAFETY DATA SHEET TOMAHAWK 200 EC Herbicide

### Section 1: Identification of the Substance and Supplier

**Product name:** TOMAHAWK 200 EC  
**Chemical name of active Ingredient(s):** [(4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy]acetic acid methyl heptyl ester  
**Supplier:** ADAMA New Zealand Limited  
Level1/19 Elms Street, Wakatu Estate, Stoke, Nelson, New Zealand  
P.O. Box 1799, Nelson New Zealand.  
+64 3 543 8275 Fax: +64 3 543 8274  
**Telephone:**  
**Emergency Telephone:** 0800 POISON (0800 764 766)

### Section 2: Hazards Identification

**Hazard Classifications:** 3.1D, 6.1E, 6.4A, 9.1A, 9.2A

**Most important hazards:**

#### TOXICITY

**Warning –**

May be harmful if swallowed, inhaled or absorbed through the skin.

May cause eye irritation.

Avoid skin contact or inhalation. Avoid contact with eyes.

#### FLAMMABILITY

**Warning –**

Combustible liquid. Do not store or use near heat or naked flame. Will burn if ignited.

#### ECOTOXICITY

Very toxic to aquatic organisms with long-lasting effects. Avoid contamination of any water supply with product or empty container. Very toxic to the soil environment.

Very toxic to some plant species. Certain plants may be damaged or killed from contact with this product.

DO NOT allow drift outside the target area to occur.

### Section 3. Composition/Information on Ingredients

**Substance/preparation** Preparation

**Information on hazardous ingredients \***

Common name	CAS No.	%	EC Number	Symbol	R-Phrases
Fluroxypyr-meptyl	81406-37-3	28-30	279-752-9	N	R50/53
Solvent naphtha (petroleum), Heavy arom.	64742-94-5	64-69	265-198-5	Xn	R65

- Occupational Exposure Limit(s), if available, are listed in section 8

### Section 4: First-Aid Measures

#### Effects and symptoms:

**Skin contact:** Irritating to skin

**Eye contact:** Irritating to eyes.

#### First-aid measures:

**Inhalation:** Remove victim from area of exposure. Wash off remaining material with plenty of water.

Remove victim to fresh air. If breathing is difficult: artificial respiration.

Get medical attention.

**Ingestion:** Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.

Get medical attention.

**Skin contact:** Remove contaminated clothing. Wash away remainder with water and soap.

**Eye contact:** Wash out with plenty of water with the eyelid held wide open for at least 15 minutes.

Get medical attention.

**Notes to a physician:** There is no specific antidote. Treat symptomatically and give supportive therapy.

**Protection of first-aiders:** Use appropriate protection (see section 8).



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#### Section 5: Fire-Fighting Measures

##### Extinguishing media

<b>Suitable:</b>	Dry chemical, water spray, foam, carbon dioxide.
<b>Unusual fire/explosion hazards:</b>	Flashback may occur along vapour trail.
<b>Hazardous thermal (de)composition products:</b>	Chloride compounds, Fluoride compounds and nitrogen oxides
<b>Protection of fire-fighters:</b>	Self-contained breathing apparatus and total protection required in enclosed areas.

#### Section 6: Accidental Release Measures

<b>Personal precautions:</b>	Wear suitable protective clothing.
<b>Environmental precautions:</b>	Do not discharge into drains or the environment.
<b>Methods for cleaning up</b>	Keep away from: open flame, sparks and heat. Absorb remainder in sand or other inert material. Dispose of in an authorised waste collecting point.

#### Section 7: Handling and Storage

<b>Handling:</b>	Avoid contact with skin and eyes. Ventilation required. Keep away from sparks, open flame and direct sunlight.
<b>Storage:</b>	Store in the original, unopened container in a well-ventilated, cool, dry place, out of direct sunlight and away from sources of ignition, stockfeed or foodstuffs. As a Class 9 Substance with Ecotoxicity Classifications storage of ADAMA Tomahawk Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS 8409:2004) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations. Do not store with incompatible substances.
<b><u>Packaging materials suitable:</u></b>	Multi-layer high-density polyethylene extrusion blow containers. Resin-lined metal drums.

#### Section 8: Exposure Controls/Personal Protection

<b>Engineering measures:</b>	Ventilation required.
<b>Hygiene measures:</b>	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.
<b>Occupational Exposure Limits</b>	
<b><u>Common name:</u></b>	<b>Fluroxypyr-meptyl</b>
<b><u>Common name:</u></b>	Not Established
<b>TLV (USA)</b>	Solvent naphta (petroleum), heavy arom. 25 ppm
<b><u>Personal protective equipment:</u></b>	
<b>Respiratory system:</b>	Respiratory protection is not required if good ventilation is maintained.
<b>Skin and body:</b>	Wear suitable protective clothing.
<b>Hands:</b>	Chemical resistant gloves.
<b>Eyes:</b>	Safety goggles or face shield.

#### Section 9: Physical and Chemical Properties

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Amber
<b>Odour:</b>	Aromatic (solvent)
<b>Boiling point:</b>	~200°C (Water)
<b>Density:</b>	0.992 ± 0.015 g/mL @ 20°C (Fluroxypyr-meptyl)
<b>Vapour pressure:</b>	7 x 10 <sup>4</sup> mPa @ 20°C (solvent)



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<b>Solubility in water:</b>	0.9 ppm @ 20°C (Fluroxypyr-meptyl) 91 ppm @ 20°C (Fluroxypyr) log = 4.5 (Fluroxypyr-meptyl)
<b>Octanol/water partition coefficient</b>	
<b>pH:</b>	5 - 7
<b>Flash Point:</b>	CIPAC, MT 75 65°C closed cup
<b>Flammability:</b>	Not flammable
<b>Auto ignition temperature:</b>	> 450 °C (solvent)
<b>Explosion properties:</b>	Solvent (vapours) – may form explosive mixture with air.
<b>Lower explosion limit:</b>	0.6 volume %
<b>Upper explosion limit:</b>	7 volume %
<b>Oxidation properties:</b>	Not oxidizing

#### Section 10: Stability and Reactivity

<b>Stability:</b>	Not subject to polymerization.
<b>Materials to avoid:</b>	Oxidizing agents, acids and alkali.
<b>Hazardous reactions:</b>	
<b>Hazardous decomposition products:</b>	Chloride compounds, Fluoride compounds and nitrogen oxides.

#### Section 11. Toxicological Information

<b>Acute toxicity - Oral:</b>	LD <sub>50</sub> (rat) = 2,000 mg/kg
<b>Acute toxicity - Dermal:</b>	LD <sub>50</sub> (rat) > 2,000 mg/kg
<b>Acute toxicity – Inhalation:</b>	LC <sub>50</sub> (rat) > 5.2 mg/L (4 hours)
<b>Skin irritation:</b>	Moderately irritating (rabbit).
<b>Eye irritation:</b>	Moderately irritating (rabbit).
<b>Sensitization :</b>	Non sensitizer (guinea-pig)
<b>Common name:</b>	<b>Fluroxypyr-meptyl</b>
<b>Chronic toxicity:</b>	NOAEL (rat): = 80 mg/kg/day; mice = 320 mg/kg/day
<b>Carcinogenicity:</b>	EPA : Not classified EU : Not classified IARC : Not classified NOEL = 1,000 mg/kg/day (mice) NOEL = 320 mg/kg/day (rat)
<b>Mutagenicity:</b>	Not mutagenic
<b>Other information:</b>	Teratogenicity: Not teratogenic in animal experiments NOAEL = 1,000 mg/kg/day (rat)

#### Section 12: Ecological Information

<b>Common name:</b>	<b>Fluroxypyr-meptyl</b>
<b>Mobility:</b>	Soil – moderately mobile (Fluroxypyr)
<b>Persistence/degradability:</b>	<b>Soil</b> The product is not persistent. Half-life time (t <sub>1/2</sub> ): 5-9 days (Fluroxypyr) < 7 days (Fluroxypyr-meptyl) Degradation is primarily via: microorganisms. (Fluroxypyr-meptyl) Hydrolysis (Fluroxypyr-meptyl)
<b>Ecotoxicity:</b>	<b>Water</b> DT <sub>50</sub> = 1-3 days (Fluroxypyr-meptyl) <b>Fish</b> LC <sub>50</sub> (96 hours) rainbow trout > 100 mg/L (Fluroxypyr) golden orfe > 100 mg/L (Fluroxypyr) rainbow trout > 0.9 mg/L, solubility limit (Fluroxypyr-meptyl) golden orfe > 0.9 mg/L, solubility limit (Fluroxypyr-meptyl)
	<b>Daphnia magna</b>



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EC<sub>50</sub> (48 hours) > 100 mg/L (Fluroxypyr)  
>0.9 mg/L, solubility limit (Fluroxypyr-meptyl)

### Birds

Bobwhite quail LD<sub>50</sub> > 2,000 mg/kg (Fluroxypyr-meptyl & Fluroxypyr)  
Mallard duck LD<sub>50</sub> > 2,000 mg/kg (Fluroxypyr-meptyl & Fluroxypyr)

### Bees

Oral LD<sub>50</sub> > 100 µg/bee (Fluroxypyr-meptyl)  
Contact LD<sub>50</sub> > 100 µg/bee (Fluroxypyr-meptyl)  
Contact LD<sub>50</sub> > 25 µg/bee (Fluroxypyr)

Harmful to aquatic organisms. Not toxic: birds and Bees

## Section 13: Disposal Considerations

**Methods of disposal:** Dispose of in a pesticide approved landfill, or in a chemical incinerator equipped with scrubbers, in accordance with national and regional regulations.

## Section 14: Transport Information

<b>UN Number</b>	<b>3082</b>
<b>Proper shipping name</b>	Environmentally hazardous substance, Liquid, N.O.S, Napta
<b>DG Class</b>	9
<b>Packing Group</b>	III
<b>Hazchem Code</b>	2X
<b>Marine Pollutant</b>	Yes
<b>IER Guide page</b>	47

**National transport regulations:** Do not carry this product on a passenger service vehicle.

**Segregation:** Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

## Section 15: Regulatory Information

### **New Zealand Regulatory Information:**

**NZFSA Approval:** Registered pursuant to the ACVM Act 1997. No P7327  
See [www.nzfsa.govt.nz/acvm](http://www.nzfsa.govt.nz/acvm) for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval No. HSR000512  
See [www.ermanz.govt.nz](http://www.ermanz.govt.nz) for registration conditions

**HSNO Classifications:** 3.1D, 6.1E, 6.4A, 9.1A, 9.2A



### **ECOTOXIC**

**APPROVED HANDLER** - This product must be under the care of an approved handler when it is applied in a wide dispersive manner or used by a commercial contractor

**RECORD KEEPING** - Records of use must be kept under certain circumstances – see The New Zealand Standards for Management of Agrichemicals (NZS8409) for details.



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### Section 16: Other Information

Note: This product is a registered agricultural chemical and must be therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

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#### **HISTORY**

**Date of printing:** 23/07/2014  
Supersedes SDS issued 18/07/2005