

MATERIAL SAFETY DATA SHEET



Date of Issue: August 27th 2010

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product name Wildcat® 110 EC Selective Herbicide
Other names None
Product codes and pack sizes 4318713 (10 L)
Chemical group Aryloxyphenoxypropionate + pyrazoline dicarboxylate safener
Recommended use Agricultural herbicide
Formulation Emulsifiable concentrate
Supplier Bayer CropScience Pty Ltd ABN 87 000 226 022
Address 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia
Telephone (03) 9248 6888
Facsimile (03) 9248 6800
Website www.bayercropscience.com.au
Contact Development Manager (03) 9248 6888
Emergency Telephone Number 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HAZARDOUS SUBSTANCE (see Risk phrases below) – DANGEROUS GOOD
Combustible liquid. Dangerous to the aquatic environment.

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases R36/38 – Irritating to eyes and skin.
R43 - May cause sensitisation by skin contact.
R65 - Harmful: May cause lung damage if swallowed.
Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13
ADG classification See Section 14.
SUSDP classification (Poison Schedule) Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredients | CAS Number | Concentration (g/L) |
|------------------------------------------|-----------------|---------------------|
| Fenoxaprop-p-ethyl | [71283-80-2] | 110 |
| Mefenpyr-diethyl (crop safener) | [135590-91-9] | 30 |
| Hydrocarbon solvent | [64742-94-5] | 594 |
| Naphthalene (in hydrocarbon solvent) | [91-20-3] | (59 – 83) |
| Other ingredients, including emulsifiers | (non hazardous) | 296 |

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4. FIRST AID MEASURES

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 the doctor.

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| Inhalation | If inhaled, remove to fresh air and keep at rest. Obtain medical advice if symptoms persist. If breathing stops or shows signs of failing, start artificial respiration. Call for prompt medical attention. |
| Skin contact | Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if symptoms persist. |
| Eye contact | Rinse eyes immediately with lukewarm water for at least 15 minutes and obtain medical aid. |
| Ingestion | 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. |
| First Aid Facilities | Provide eyewash and safety shower facilities in the workplace. |
| Medical attention | <u>Symptoms</u> <i>Local:</i> Irritation of eyes, skin and respiratory tract. Potential for skin sensitisation. Repeated exposure may cause skin dryness or cracking. <i>Systemic:</i> Headache, dizziness, anaesthesia or other CNS effects. <u>Treatment</u> For <i>local contamination</i> treatment should be symptomatic after decontamination. <i>If a large amount (more than one mouthful) has been ingested, the following measures should be considered:</i> Monitor kidney and liver function and red blood cell count. Observe blood lipids and cholesterol for hypolipidaemia and lowered cholesterol. Gastric lavage followed by charcoal administration Elimination by dialysis - forced alkaline diuresis Anticonvulsant therapy is not appropriate. There is no specific antidote. As this product contains a hydrocarbon liquid, 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. |

5. FIRE FIGHTING MEASURES

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| Extinguishing media | Water fog, fine water spray, foam or dry agent. |
| Hazards from combustion products | In a fire, irritant and toxic fumes containing oxides of carbon and nitrogen, hydrogen chloride and other toxic substances may be generated. |
| Precautions for fire fighters | The product is a Class C1 Combustible liquid. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Avoid spraying directly into containers due to danger of boilover. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later. |

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5. FIRE FIGHTING MEASURES - continued

Hazchem code 3Z

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with the spilled material or contaminated surfaces. Extinguish or remove sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8 - PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. 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.

7. HANDLING AND STORAGE

Handling Keep out of reach of children. Harmful if swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Do not inhale vapour. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. 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, goggles, contaminated clothing and respirator – if rubber wash it with detergent and warm water.

Storage Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Keep away from all ignition sources.

Flammability Combustible liquid, Class C1 - flashpoint between 61° C and 150° C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards The manufacturer of the solvent recommends an Occupational Exposure Limit for solvent naphtha (petroleum), heavy aromatic: TWA: 100 mg/m³ (15 ppm).
For the naphthalene present in the solvent the NOHSC Occupational Exposure Limits are:
TWA: 10 ppm (52 mg/m³, STEL: 15 ppm (79 mg/m³).

Definitions:

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Exposure standard – Short term exposure limit (STEL) means a 15 minute TWA exposure which should not be exceeded at any time during the working day.

Engineering controls Control process conditions to avoid contact. Use in a well-ventilated area only.

Biological limit values None allocated.

Personal Protective Equipment

- Wear goggles
- Wear cotton overalls buttoned to the neck and wrist and a washable hat.
- Wear elbow-length PVC gloves.
- If working in a poorly ventilated area or if occupational exposure levels are likely to be exceeded, wear a respirator suitable for organic vapours - AS/NZS 1715/1716 approved. When using the prepared spray wear a half facepiece respirator.

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9. PHYSICAL AND CHEMICAL PROPERTIES

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|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Appearance: | Clear yellow liquid |
| Odour: | Slight naphtha |
| pH: | 4.5 to 6.5 (5% aqueous emulsion) |
| Vapour pressure: | 0.03 kPa (at 38° C) (hydrocarbon solvent) |
| Vapour density: | > 1.00 (hydrocarbon solvent) |
| Boiling point: | 220 – 290 °C (hydrocarbon solvent) |
| Freezing/melting point: | Not available |
| Solubility: | Emulsifies in water |
| Density: | 1.03 g/mL at 20° C |
| Flash Point: | Approximately 95° C (Pensky Martens Closed Cup) |
| Flammability (explosive) limits: | LEL: 0.6; UEL: 7.0 Vol. % in air (hydrocarbon solvent) |
| Auto-ignition temperature: | > 450° C (hydrocarbon solvent) |
| Partition coefficient (octanol/water): | <i>Fenoxaprop-p-ethyl</i> : Log P _{ow} = 4.58 <i>Mefenpyr-diethyl</i> : Log P _{ow} = 3.83 |

10. STABILITY AND REACTIVITY

| | |
|-----------------------------------------|-----------------------------------------------------------------------------------------|
| Chemical stability | Stable under normal conditions of use. |
| Conditions to avoid | Avoid sources of ignition and extreme heat. |
| Incompatible materials | Incompatible with strong oxidising agents. |
| Hazardous decomposition products | Hydrogen chloride, nitrogen oxides and other toxic compounds may be released in a fire. |
| Hazardous reactions | None known |

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

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|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation | The product has a low inhalation toxicity. However, avoid inhaling vapour. High vapour concentrations may be irritating to the respiratory tract and may cause headaches, dizziness, drowsiness, anaesthesia, and other central nervous system effects. |
| Skin contact | Will irritate the skin. The product had low acute dermal toxicity and was not sensitising animal tests. The active ingredient fenoxaprop-p-ethyl was sensitising to the skin in one test, but not in another. Repeated exposure may cause skin dryness or cracking. |
| Eye contact | Will irritate the eyes. |
| Ingestion | Harmful if swallowed. May cause lung damage if swallowed. |

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11. TOXICOLOGICAL INFORMATION - continued

ANIMAL TOXICITY DATA – PRODUCT

Acute:

| | |
|----------------------------|-----------------------------------------------------------------------|
| Oral toxicity | LD ₅₀ rat: 3254 mg/kg (<i>similar product</i>) |
| Dermal toxicity | LD ₅₀ rat: > 5000 mg/kg (<i>similar product</i>) |
| Inhalation toxicity | LC ₅₀ rat (4 hour): > 5.45 mg/L (<i>similar product</i>) |
| Skin irritation | Irritating (rabbit) (<i>similar product</i>) |
| Eye irritation | Irritating (rabbit) (<i>similar product</i>) |
| Sensitisation | Non-sensitising (guinea pig) (<i>similar product</i>) |

Chronic:

Fenoxaprop-p-ethyl showed no mutagenicity in *in vitro* and *in vivo* tests. There was no indication of developmental, reproductive or carcinogenic effects in animal studies.

Mefenpyr-diethyl showed no mutagenicity, reproductive toxicity, teratogenicity or carcinogenicity in animal studies. This product contains naphthalene. The International Agency for Research on Cancer evaluated naphthalene and concluded that there was sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Accordingly, IARC classified naphthalene as a possible human carcinogen (Group 2B). Frequent or prolonged contact with the hydrocarbon solvent in this product may defat and dry the skin, leading to discomfort and dermatitis.

12. ECOLOGICAL INFORMATION

Dangerous to fish and other aquatic organisms. Low toxicity to birds, bees and earthworms.
DO NOT contaminate streams, rivers or waterways with Wildcat 110 or the used containers.

Ecotoxicity

Fenoxaprop-p-ethyl:

Fish toxicity: LC₅₀ (96 h) for rainbow trout 0.39 mg/L
Daphnia toxicity: EC₅₀ (48 h) for *Daphnia magna* > 1.058 mg/L
Algae toxicity: EC₅₀ (72 h) for *Selenastrum capricornutum* 0.54 mg/L
Bird toxicity: Acute oral LD₅₀ for bobwhite quail > 2000 mg/kg

Mefenpyr-diethyl:

Fish toxicity: LC₅₀ (96 h) for carp 2.4 mg/L, for rainbow trout 4.2 mg/L
Daphnia toxicity: EC₅₀ (48 h) for *Daphnia magna* 53 mg/L
Algae toxicity: EC₅₀ (72 h) for *Navicula pelliculosa* 1.65 mg/L
E₅C₅₀ (72 h) for *Scenedesmus subspicatus* 5.8 mg/L
Bird toxicity: Acute oral LD₅₀ for Japanese quail > 2000 mg/kg

Environmental fate, persistence, degradability and mobility

Fenoxaprop-p-ethyl is moderately / partially biodegradable.
No leaching potential for fenoxaprop-p-ethyl or its metabolites.
Mefenpyr-diethyl – abiotic hydrolysis DT₅₀ > 365 days (pH 5), 40.9 days (pH 7), 0.35 days (pH 9) at 25° C. Photodegradation DT₅₀ 2.9 days. Completely mineralised in soil by hydrolysis, microbial and photolytic degradation processes; DT₅₀ < 10 days. Not leached.
The solvent is expected to degrade at a moderate rate and be “inherently” biodegradable.

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13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse containers 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 through a reputable waste disposal contractor.

14. TRANSPORT INFORMATION

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|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UN number | UN 3082 |
| Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains fenoxaprop-p-ethyl) |
| Class and Subsidiary Risk | Class 9 |
| Packing Group | Packing Group III |
| Hazchem code | •3Z |
| Marine Pollutant | Yes – Severe "PP" |
| Note for Road and Rail Transport | According to AU01, Environmentally Hazardous Substances in packagings, IBCs or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code |

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 54681

See also Section 2.

16. OTHER INFORMATION

Trademark information Wildcat® is a Registered Trademark of Bayer.

Preparation information Replaces November 27th 2009 edition.
Reasons for revision: Hazards identification.

This MSDS summarises 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.

END OF MSDS