

MATERIAL SAFETY DATA SHEET

Chipco® Spearhead Selective Herbicide

Date of Issue: September 18, 2003

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Chipco® Spearhead Selective Herbicide
Other names: None
Product code: Not available
Recommended use: For the control of broad-leaved weeds in turf.
Supplier: Bayer Environmental Science – A Business Group of 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: Technical Manager (03) 9248 6888
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

Attacks the eyes and will irritate skin. Not flammable.

Hazard designation: Hazardous according to criteria of Worksafe Australia
Risk phrases: R20/21/22 – Harmful by inhalation, in contact with skin and if swallowed
R41 – Risk of serious damage to eyes
Safety phrases: Not applicable
ADG classification: Not “dangerous goods” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
SUSDP classification: Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L):
MCPA present as the potassium salt	[94-74-6]	300
Clopyralid	[1702-17-6]	20
Diflufenican	[83164-33-4]	15
Other ingredients	(non hazardous)	665

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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 a doctor.

Inhalation:	Remove victim to fresh air. Seek medical advice.
Skin contact:	If product on skin remove contaminated clothing and immediately wash area with plenty of soap and water. Obtain medical advice if symptoms occur
Eye contact:	If product in eyes, wash eyes immediately with copious quantities of water for at least 15 minutes. Seek medical assistance.
Ingestion:	If swallowed wash out mouth with water. Keep patient at rest. Seek immediate medical assistance.
First Aid Facilities:	Ensure washing facilities are available - including eye-wash station.
Symptoms:	No specific symptoms are associated with exposure to this product.
Medical attention:	No specific antidote known. Treat symptoms.
Other First Aid:	DO NOT attempt to give anything to a semi-conscious or unconscious person. In the case of poisoning by any exposure route, contact a doctor or Poisons Information Centre (telephone:13 11 26).

5. FIRE FIGHTING MEASURES

Extinguishing media:	Extinguish fire using: Water, Fog, Foam, Dry agent
Hazards from combustion products:	Not available
Precautions for fire fighters:	Full protective gear, including self-contained breathing apparatus (SAA 1716), must be worn. In case of fire prevent, by any means, possible spillage from entering drains or water-courses. Move all other personnel to windward side of fire.

6. ACCIDENTAL RELEASE MEASURES

Personnel involved in clean-up require adequate respiratory, skin and eye protection. In case of spillage prevent the material from entering drains or water courses. Remove with liquid binding material (eg. sand, soil or diatomaceous earth). Place into suitable containers.

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7. HANDLING AND STORAGE

- Handling:** Keep out of reach of children. Wear long sleeved overalls and elbow length PVC gloves while handling. After handling and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. Avoid contact with the eyes, skin and clothing or inhalation of product.
- Storage:** Store in the closed original container in a dry, cool well-ventilated area, out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilizers. Must be stored and transported according to local State/Territory and Federal regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Exposure standards:** No occupational exposure standards have been established for the product or its ingredients.
- Engineering controls:** Use in a well-ventilated area only.
- Personal Protective Equipment:** When opening the container, preparing the spray and using the prepared spray wear face-shield or goggles.
- When opening container, preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent) and a washable hat.
- May irritate the skin – wear elbow length PVC gloves.
- Do not breathe vapour/ spray / fumes.
- Do not eat, drink or smoke until after washing. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Viscous light brown liquid.
- Odour:** Negligible (very slight sweet smell)
- Vapour pressure:** Diflufenican 4.25×10^{-3} mPa; Clopyralid 1.33 mPa (pure); MCPA 2.3×10^{-2} mPa
- Vapour density:** Not determined
- Boiling point:** Not determined
- Solubility:** Dispersible in water
- Density:** 1.170 at 20 degrees C
- pH (undiluted):** 10
- Flash Point:** Not determined
- Flammability (explosive) limits:** Not determined
- Auto-ignition temperature:** Not available
- Octanol/water partition coefficient:** Not available
- Formulation:** Suspension concentrate

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10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Hazardous polymerisation:	None known
Conditions to avoid:	Avoid extreme heat
Incompatible materials:	Not available
Hazardous decomposition products:	No hazards are expected if the material is handled, stored and used according to instructions and government regulations.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation:	Harmful if inhaled. Avoid breathing concentrated vapour or spray mist.
Skin contact:	Harmful in contact with skin. Will irritate the skin.
Eye contact:	Attacks the eyes – risk of serious damage to eyes.
Ingestion:	Harmful if swallowed.
Other:	None

ANIMAL TOXICITY DATA – PRODUCT: No data available for the product.

ANIMAL TOXICITY DATA – ACTIVE INGREDIENTS:

Acute:

Oral toxicity:	LD ₅₀ rat: 2675 – 3738 mg/kg (Clopyralid)
(Technical active)	LD ₅₀ rat: 900 – 1160 mg/kg (MCPA)
	LD ₅₀ rat: > 2000 mg/kg (Diflufenican)
Dermal toxicity:	LD ₅₀ rabbit: >2000 mg/kg (Clopyralid)
(Technical active)	LD ₅₀ rat: >4000 mg/kg (MCPA)
	LD ₅₀ rat: > 2000 mg/kg (Diflufenican)
Inhalation toxicity:	LC ₅₀ (4 h) rat: >0.38 mg/L (Clopyralid)
(Technical active)	LC ₅₀ (4 h) rat: >6.36 mg/L (MCPA)
	LC ₅₀ (4 h) rat: > 2.34 mg/L (Diflufenican)
Skin irritation:	Mild skin irritant - MCPA

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- Eye irritation:** Severe eye irritant - Clopyralid
Irritating to eyes – MCPA
- Sensitisation:** No data available for product.
- Toxicology:
(Product)** Oral LD₅₀ (mg/kg) 2794 (calculated for product by GIFAP method)

Chronic:

In 24 month feeding trials (technical MCPA), the no effect level for rats was 1.3 mg/kg bw/d and for mice was 18 mg/kg bw/d. Non-mutagenic. Non-teratogenic.

12. ECOLOGICAL INFORMATION

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

DO NOT apply under meteorological conditions or from spraying equipment that could be expected to cause spray to drift onto nearby plants, adjacent crops, croplands or pastures.

- Fish toxicity:** Technical MCPA: LC₅₀: 232 mg/L (96 h) rainbow trout
Technical Clopyralid: LC₅₀: 103.5 mg/L (96 h) rainbow trout
Technical Diflufenican: LC₅₀: 56-100 mg/L (96 h) rainbow trout
- Daphnia toxicity:** Technical Clopyralid: EC₅₀ (48hr) 225 mg/L
Technical Diflufenican: LC₅₀ (48hr) no effect at 10 mg/L
Technical MCPA: LC₅₀ >100 mg/L
- Toxicity to algae:** Technical Clopyralid: EC₅₀ (96hr) *Selenastrum capricornutum* cell count 6.9 mg/L
Technical Diflufenican: No growth inhibition of algae at 10 mg/L
Technical MCPA: No information available
- Bird toxicity:** Technical MCPA: Acute oral LD₅₀: 377 mg/kg bobwhite quail
Technical Clopyralid: Acute oral LD₅₀: >2000 mg/kg bobwhite quail
Technical Diflufenican: Acute oral LD₅₀: >2150 mg/kg bobwhite quail
- Bee toxicity:** Technical clopyralid: Non-toxic to bees.
Technical Diflufenican: Non-toxic by ingestion or contact
Technical MCPA: LD₅₀ 0.104 mg/bee
- Other:** None
- Environmental fate, persistence and degradation:** Diflufenican half life varies from 15 to 30 weeks depending on soil type and water content.
MCPA – duration of residual activity in soil is c. 3 to 4 months following an application of 3 kg/ha.

13. DISPOSAL CONSIDERATIONS

In accordance with government regulations for the disposal of special waste. Follow Avcare guidelines. Do not discharge into drains or sewers.

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14. TRANSPORT INFORMATION

UN number: Not applicable
Proper shipping name: Not applicable
Class and Subsidiary Risk: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Packing Group: Not applicable
EPG: Not applicable
Hazchem code: Not applicable

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 53833

16. OTHER INFORMATION

Trademark information: Chipco and Chipco Spearhead® is a Registered Trademark of Bayer.

Preparation information: Replaces October 22, 2002 edition.
Reason for update: Additional information on vapour pressures of active ingredients added.

Data sources: Bayer CropScience Pty Ltd product safety data and published data

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