

# Safety Data Sheet



## Spearhead® Selective Herbicide

Version 1 / AUS  
102000022432

Revision Date: 05.10.2022  
Print Date: 05.10.2022

### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Trade name** Spearhead® Selective Herbicide  
**Product code (UVP)** 06069215

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use** Herbicide

#### 1.3 Details of the supplier of the safety data sheet

**Supplier** Bayer Cropscience Pty Ltd  
ABN 87 000 226 022  
Level 1, 8 Redfern Road  
3123 Hawthorn East  
Victoria  
Australia

**Telephone** (03) 9248 6888

**Telefax** (03) 9248 6800

**Responsible Department** 1800 804 479 Technical Information Service

**Website** [www.es.bayer.com.au](http://www.es.bayer.com.au)

#### 1.4 Emergency telephone no.

**Emergency telephone no.** 1800 033 111 IXOM Operations Pty Ltd

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification in accordance with Australian GHS Regulation

Acute toxicity: Category 4  
H302 Harmful if swallowed.

Skin irritation: Category 2  
H315 Causes skin irritation.

Serious eye damage: Category 1  
H318 Causes serious eye damage.

Acute aquatic toxicity: Category 1  
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1  
H410 Very toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

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### Labelling according to specific Australian legislation

Hazard label for supply/use required.

### Hazardous components which must be listed on the label:

MCPA  
Clopyralid  
Diflufenican

**Signal word:** Danger

### Hazard statements

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

### Precautionary statements

P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.  
P330 Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
+ P338  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.  
P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

No additional hazards known beside those mentioned.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature

MCPA/Clopyralid/Diflufenican 300:20:15 g/l  
Suspension concentrate (=flowable concentrate)(SC)

Chemical name	CAS-No.	Concentration [%]
MCPA	94-74-6	25.64
Clopyralid	1702-17-6	1.71
Diflufenican	83164-33-4	1.28
1,2-Propanediol	57-55-6	>= 1.00 - <= 5.00
Other ingredients (non-hazardous) to 100%		

## SECTION 4. FIRST AID MEASURES



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**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.**

### 4.1 Description of first aid measures

<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation or redness persists, see an ophthalmologist.
<b>Ingestion</b>	Rinse mouth. Keep at rest. Obtain medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Local: Prolonged and repeated contact with skin, eyes or mucous membranes may cause irritation. Systemic: Mild acidosis, tachycardia, Irregular cardiac activity, Low blood pressure, Circulatory collapse, Cough, Shortness of breath, Nausea, Vomiting, Diarrhoea, Abdominal pain, Rhabdomyolysis, Somnolence, Coma, Fever, Convulsions
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### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Treatment</b>	Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. Elimination by dialysis (forced alkaline diuresis). There is no specific antidote.
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## SECTION 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

<b>Suitable</b>	Water, Foam, Dry chemical
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<b>5.2 Special hazards arising from the substance or mixture</b>	In the event of fire the following may be released: Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Nitrogen oxides (NO <sub>x</sub> ), Hydrogen fluoride, Hydrogen chloride (HCl)
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### 5.3 Advice for firefighters

<b>Special protective equipment for firefighters</b>	Wear self-contained breathing apparatus and protective suit.
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<b>Further information</b>	Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Whenever possible, contain fire-fighting water by diking area with sand or earth.
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<b>Hazchem Code</b>	•3Z
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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**Precautions** An emergency shower must be readily accessible to the work area. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Use personal protective equipment. Keep unauthorized people away.

**6.2 Environmental precautions** Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. If the product contaminates rivers and lakes or drains inform respective authorities.

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container.

**6.4 Reference to other sections** Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

**SECTION 7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Hygiene measures** Avoid contact with skin, eyes and clothing.

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Keep out of the reach of children. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m <sup>3</sup> /150 ppm (TWA)	12 2011	AU NOEL
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m <sup>3</sup> (TWA)	12 2011	AU NOEL

**8.2 Exposure controls**



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<b>Respiratory protection</b>	Use respiratory protection for organic vapours.
<b>Hand protection</b>	PVC or nitrile rubber gloves
<b>Eye protection</b>	Safety glasses with side-shields
<b>Skin and body protection</b>	Impermeable protective clothing.
<b>General protective measures</b>	In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

<b>Form</b>	suspension
<b>Colour</b>	brown
<b>Odour</b>	almost odourless
<b>Odour Threshold</b>	No data available
<b>pH</b>	9.0 - 11.0 (100 %) (23 °C)
<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash point</b>	No data available
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Thermal decomposition</b>	No data available
<b>Minimum ignition energy</b>	No data available
<b>Self-accelarating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	ca. 1.17 g/cm <sup>3</sup> (20 °C)
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	MCPA: log Pow: -0.81 Clopyralid: log Pow: -2.63 Diflufenican: log Pow: 4.2



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<b>Viscosity, dynamic</b>	No data available
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Explosivity</b>	No data available

### SECTION 10. STABILITY AND REACTIVITY

<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>10.4 Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>10.5 Incompatible materials</b>	No data available
<b>10.6 Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b>	LD50 2,675 - 3,738 mg/kg The value mentioned relates to the active ingredient clopyralid. LD50 > 2,000 mg/kg The value mentioned relates to the active ingredient diflufenican. LD50 900 - 1,160 mg/kg The value mentioned relates to the active ingredient MCPA.
<b>Acute inhalation toxicity</b>	LC50 (Rat) > 0.38 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient clopyralid.  LC50 (Rat) > 2.34 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient diflufenican.  LC50 (Rat) > 6.36 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient MCPA.
<b>Acute dermal toxicity</b>	LD50 (Rabbit) > 2,000 mg/kg The value mentioned relates to the active ingredient clopyralid. LD50 (Rat) > 2,000 mg/kg The value mentioned relates to the active ingredient diflufenican. LD50 (Rat) > 4,000 mg/kg



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	The value mentioned relates to the active ingredient MCPA.
<b>Skin corrosion/irritation</b>	Mild skin irritation. Data refer to main components.
<b>Serious eye damage/eye irritation</b>	Severe eye irritation. Data refer to main components.

### Assessment mutagenicity

MCPA was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Clopyralid was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Diflufenican was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity

MCPA was not carcinogenic in lifetime feeding studies in rats and mice.  
Clopyralid was not carcinogenic in lifetime feeding studies in rats and mice.  
Diflufenican was not carcinogenic in lifetime feeding studies in rats and mice.

### Assessment toxicity to reproduction

MCPA did not cause reproductive toxicity in a two-generation study in rats.  
Clopyralid did not cause reproductive toxicity in a two-generation study in rats.  
Diflufenican did not cause reproductive toxicity in a two-generation study in rats.

### Assessment developmental toxicity

MCPA caused developmental toxicity only at dose levels toxic to the dams. MCPA caused a delayed foetal growth.  
Clopyralid did not cause developmental toxicity in rats and rabbits.  
Diflufenican did not cause developmental toxicity in rats and rabbits.

### Assessment STOT Specific target organ toxicity – single exposure

MCPA: Based on available data, the classification criteria are not met.  
Clopyralid: Based on available data, the classification criteria are not met.  
Diflufenican: Based on available data, the classification criteria are not met.

### Assessment STOT Specific target organ toxicity – repeated exposure

MCPA did not cause specific target organ toxicity in experimental animal studies.  
Clopyralid did not cause specific target organ toxicity in experimental animal studies.  
Diflufenican did not cause specific target organ toxicity in experimental animal studies.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Information on likely routes of exposure

May be harmful if inhaled.  
Irritating to skin.  
May cause irreversible eye damage.  
Harmful if swallowed.

### Early onset symptoms related to exposure

Refer to Section 4

### Delayed health effects from exposure

Refer to Section 11



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### Exposure levels and health effects

Refer to Section 4

### Interactive effects

Not known

### When specific chemical data is not available

Not applicable

### Mixture of chemicals

Refer to Section 2.1

### Further information

No further toxicological information is available.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 232 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient MCPA.

LC50 (Oncorhynchus mykiss (rainbow trout)) 56 - 100mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient diflufenican.

LC50 (Oncorhynchus mykiss (rainbow trout)) 103.5 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient clopyralid.

#### Toxicity to aquatic invertebrates

EC50 (Daphnia (water flea)) 225 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient clopyralid.  
LC50 (Daphnia (water flea)) > 100 mg/l The value mentioned relates to the active ingredient MCPA.  
LC50 (Daphnia (water flea)) 10 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient diflufenican.

#### Toxicity to aquatic plants

EC50 (Raphidocelis subcapitata (freshwater green alga)) 6.9 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient clopyralid.  
(algae) 10 mg/l  
The value mentioned relates to the active ingredient diflufenican.

#### Toxicity to other organisms

LD50 (Colinus virginianus (Bobwhite quail)) 377 mg/kg  
The value mentioned relates to the active ingredient MCPA.  
LD50 (Colinus virginianus (Bobwhite quail)) > 2,000 mg/kg  
The value mentioned relates to the active ingredient clopyralid.  
LD50 (Colinus virginianus (Bobwhite quail)) > 2,150 mg/kg  
The value mentioned relates to the active ingredient diflufenican.  
(Apis mellifera (bees))





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The value mentioned relates to the active ingredient clopyralid.  
Non-hazardous for bees.

(Apis mellifera (bees))  
The value mentioned relates to the active ingredient diflufenican.  
Non-hazardous for bees.

(Apis mellifera (bees))  
The value mentioned relates to the active ingredient MCPA.  
Non-hazardous for bees.

### 12.2 Persistence and degradability

**Biodegradability** MCPA:  
Not rapidly biodegradable  
Clopyralid:  
Not rapidly biodegradable  
Diflufenican:  
Not rapidly biodegradable

**Koc** MCPA: Koc: 10 - 157  
Clopyralid: Koc: 0.4 - 12.9  
Diflufenican: Koc: 3417

### 12.3 Bioaccumulative potential

**Bioaccumulation** MCPA: Bioconcentration factor (BCF) 1  
Does not bioaccumulate.  
Clopyralid: Bioconcentration factor (BCF) < 1  
Does not bioaccumulate.  
Diflufenican: Bioconcentration factor (BCF) 1,596  
Does not bioaccumulate.

### 12.4 Mobility in soil

**Mobility in soil** MCPA: Mobile in soils  
Clopyralid: Highly mobile in soils  
Diflufenican: Slightly mobile in soils

### 12.5 Other adverse effects

**Additional ecological information** No further ecological information is available.

## SECTION 13. DISPOSAL CONSIDERATIONS

Triple-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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.

## SECTION 14. TRANSPORT INFORMATION

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### ADG

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
Hazchem Code	•3Z

AU01: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;  
a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or  
b) IBCs

### IMDG

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)

### IATA

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION )

## SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994  
Australian Pesticides and Veterinary Medicines Authority approval number: 53833

### SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

## SECTION 16. OTHER INFORMATION

**Trademark information** Spearhead® is a Registered Trademark of the Bayer Group.

### Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways



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ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
CAS-Nr.	Chemical Abstracts Service number
CEILING Conc.	Ceiling Limit Value Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN	Skin sensitiser
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

This SDS 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 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.

If clarification or further information is needed to ensure that an appropriate risk assessment can be

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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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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