

Version 1/AUS 10200007848

Revision Date: 10.03.2022 Print Date: 10.03.2022

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier	
Trade name	Bulldock® 25 EC Insecticide
Product code (UVP)	06061818

1.2 Relevant identified uses of the substance or mixture and uses advised against			
Use	Insecticide		
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.crop.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. Acute toxicity: Category 4 H332 Harmful if inhaled. Skin irritation: Category 2 H315 Causes skin irritation. Serious eye damage: Category 1 H318 Causes serious eye damage. Carcinogenicity: Category 2 Suspected of causing cancer. H351 Aspiration hazard: Category 1

Safety Data Sheet

Bulldock® 25 EC Insecticide



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H304 May be fatal if swallowed and enters airways.

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

Labelling according to specific Australian legislation

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

Beta-Cyfluthrin Solvent Naphtha (petroleum), heavy aromatic,<1% Naphthalene

Signal word: Danger

Hazard statements

H302	Harmful if swallowed.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H304	May be fatal if swallowed and enters airways.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.
P331	Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P305 + P351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
+ P338	present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/ physician.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
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



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Beta-Cyfluthrin 25 g/l Emulsifiable concentrate (EC)

Chemical name	CAS-No.	Concentration [%]
Beta-Cyfluthrin	1820573-27-0	2.72
Solvent Naphtha (petroleum), heavy	64742-94-5	>= 80.00 - <= 90.00
aromatic		
Naphthalene	91-20-3	>= 1.00 - <= 9.00
2-Ethylhexanol	104-76-7	< 3.00
Other ingredients (non-hazardous) to 100%		

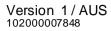
SECTION 4. FIRST AID MEASURES

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

General advice Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely. Inhalation Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately. Wash off thoroughly with plenty of soap and water, if available with Skin contact polyethyleneglycol 400, subsequently rinse with water. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician. Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eve drops, if needed anaesthetic eve drops. Get medical attention if irritation develops and persists. Rinse mouth. Do NOT induce vomiting. Do not leave victim Ingestion unattended. Call a physician or poison control center immediately. 4.2 Most important symptoms and effects, both acute and delayed Symptoms Local: Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, sneezing Systemic: discomfort in the chest, tachycardia, hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy, Dizziness

4.3 Indication of any immediate medical attention and special treatment needed

4.1 Description of first aid measures





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Risks	This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning. Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.
	In case of skin irritation, application of oils or lotions containing vitamin E may be considered.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable	Water spray, Carbon dioxide (CO2), Foam, Sand		
5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released: Carbon monoxide (CO), Hydrogen chloride (HCI), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Nitrogen oxides (NOx)		
5.3 Advice for firefighters			
Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.		
Further information	Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. After fire is extinguished, do not turn on any ignition source until the area is determined to be free from explosion or fire hazard. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.		
Hazchem Code	•3Z		

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions	Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Remove all sources of ignition. Use personal protective equipment. Keep unauthorized people away.
6.2 Environmental precautions	Contain contaminated water and fire fighting water. Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.



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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. Clean contaminated floors and objects thoroughly, observing environmental regulations.
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

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation.		
Advice on protection against fire and explosion	Keep away from heat and sources of ignition.		
Hygiene measures	Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt). After each day's use, wash gloves, face shield or goggles and contaminated clothing.		
7.2 Conditions for safe storage, including any incompatibilities			
Requirements for storage areas and containers	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Protect from frost. Keep away from direct sunlight.		
Advice on common storage	Keep away from food, drink and animal feedingstuffs.		

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Beta-Cyfluthrin	1820573-27- 0	0.01 mg/m3 (TWA)		OES BCS*
Naphthalene	91-20-3	79 mg/m3/15 ppm (STEL)	12 2011	AU NOEL
Naphthalene	91-20-3	52 mg/m3/10 ppm (TWA)	12 2011	AU NOEL
Naphthalene	91-20-3	10 ppm (TLV)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection

If product is handled while not enclosed, and if contact may occur:



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	(protection factor 10) confor Respiratory protection shou short duration activities, whe been taken to reduce expos	anic vapours and gas filter mask rming to EN140 type A or equivalent. Ild only be used to control residual risk of en all reasonably practicable steps have sure at source e.g. containment and/or vays follow respirator manufacturer's ing and maintenance.	
Hand protection	breakthrough time which are Also take into consideration the product is used, such as contact time. Wash gloves when contami inside, when perforated or w	ions regarding permeability and e provided by the supplier of the gloves. a the specific local conditions under which is the danger of cuts, abrasion, and the nated. Dispose of when contaminated when contamination on the outside cannot requently and always before eating, the toilet. Nitrile rubber > 480 min > 0.4 mm Class 6 Protective gloves complying with EN 374.	
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).		
Skin and body protection	Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.		
General protective measures	In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.		
Engineering Controls			
Advice on safe handling Us	se only in area provided with	appropriate exhaust ventilation.	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Liquid, clear
Colour	yellow
Odour	aromatic
Odour Threshold	No data available

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рН	4.5 - 7.0 (1 %) (23 °C) (deionized water)
Melting point/range	No data available
Boiling Point	No data available
Flash point	61 °C
Flammability	No data available
Auto-ignition temperature	> 400 °C The data refer to the solvent.
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	7 %(V) The data refer to the solvent.
Lower explosion limit	0.6 %(V) The data refer to the solvent.
Vapour pressure	0.3 kPa (38 °C) The data refer to the solvent.
Evaporation rate	No data available
Relative vapour density	> 1 The data refer to the solvent.
Relative density	No data available
Density	ca. 0.92 g/cm³ (20 °C)
Water solubility	emulsifiable
Partition coefficient: n- octanol/water	Beta-Cyfluthrin: log Pow: 6.18 (22 °C)
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.



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10.3 Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
10.4 Conditions to avoid	Extremes of temperature and direct sunlight.
10.5 Incompatible materials	Store only in the original container.
10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 300 - < 2,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) ca. 2.382 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol.
Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg
Skin corrosion/irritation	Irritating to skin. (Rabbit)
Serious eye damage/eye irritation	Severe eye irritation. (Rabbit)
Respiratory or skin sensitisation	Non-sensitizing. (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment mutagenicity

Beta-Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Beta-Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Beta-Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Beta-Cyfluthrin is related to parental toxicity.

Assessment developmental toxicity

Beta-Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Beta-Cyfluthrin are related to maternal toxicity.

Assessment STOT Specific target organ toxicity - single exposure

Beta-Cyfluthrin: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

The toxic effects of Beta-Cyfluthrin are related to transient neurobehavioral effects typical for pyrethroid neurotoxicity.

Aspiration hazard

May be fatal if swallowed and enters airways.



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Information on likely routes of exposure

Harmful if inhaled. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Irritating to skin. Prolonged skin contact may cause skin irritation and/or dermatitis. Skin contact especially to the face may result in a tingling sensation and reddening of the skin. May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals. May cause severe eye irritation.

Harmful if swallowed. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.

Early onset symptoms related to exposure

Refer to Section 4

Delayed health effects from exposure

Refer to Section 11

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 (Lepomis macrochirus (Bluegill sunfish)) 0.00028 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient beta-cyfluthrin.
	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.000089 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient beta-cyfluthrin.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.00029 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient.
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus (green algae)) > 0.01 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient. No acute toxicity was observed at its limit of water solubility.



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Toxicity to other organisms	LD50 (Coturnix japonica (Japanese quail)) > 2,000 mg/kg The value mentioned relates to the active ingredient beta-cyfluthrin.	
	LD50 (Eisenia fetida (earthworms)) > 1,000 mg/kg The value mentioned relates to the active ingredient beta-cyfluthrin.	
12.2 Persistence and degradability		
Biodegradability	Beta-Cyfluthrin: Not rapidly biodegradable	
Кос	Beta-Cyfluthrin: Koc: 508 - 3179	
12.3 Bioaccumulative potential		
Bioaccumulation	Beta-Cyfluthrin: Bioconcentration factor (BCF) 506 Does not bioaccumulate.	
12.4 Mobility in soil		
Mobility in soil	Beta-Cyfluthrin: Immobile in soil	
12.5 Other adverse effects		
Additional ecological information	No other effects to be mentioned.	

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. Do not reuse container for any other purpose.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
	(BETA-CYFLUTHRIN 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

a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or
b) IBCs

IMDG

UN number



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	Transport hazard class(es) Subsidiary Risk Packaging group Marine pollutant Description of the goods	9 None III YES ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION)
ΙΑΤΑ		
	UN number Transport hazard class(es) Subsidiary Risk Packaging group Environm. Hazardous Mark Description of the goods	3082 9 None III YES ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BETA-CYFLUTHRIN SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994 Australian Pesticides and Veterinary Medicines Authority approval number: 40422

SUSMP classification (Poison Schedule)

Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 16. OTHER INFORMATION

Trademark information Bulldock® is a Registered Trademark of the Bayer Group.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AUOEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
CAS-Nr.	Chemical Abstracts Service number
CEILING	Ceiling Limit Value
Conc.	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)



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ICx IMDG	Inhibition concentration to x % International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL N.O.S.	MARPOL: International Convention for the prevention of marine pollution from ships 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
TWA	STEL.
IVVA	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 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.