

SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade Name **Ficam® W Insecticide**

Product code (UVP): 05935598

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

Bayer CropScience Pty Ltd
Level 1, 8 Redfern Rd,
Hawthorn East, Vic 3123
Australia
www.environmentalscience.bayer.com.au

New Zealand Agent

Bayer New Zealand Ltd
3 Argus Place, Hillcrest, Auckland,
0627 New Zealand
Telephone: 0800 428 246
Facsimile: (09) 441 8645

1.4 Emergency telephone no.

Emergency telephone no. 0800 734 607 IXOM Operations Pty Ltd (24 hr)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with New Zealand Regulation

Hazardous classification: Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Signal word: Danger

HSNO classifications 6.1B (All), 6.1B (O), 6.1C (I), 6.1D (D), 6.9A (All), 9.1A (All), 9.1A (F), 9.3A, 9.4A.
Fatal if swallowed.
Toxic if inhaled.
Harmful in contact with skin.
Causes damage to organs from repeated oral exposure.
Very toxic to aquatic life.
Very toxic to terrestrial vertebrates.
Very toxic to terrestrial invertebrates.

Pictograms:





Classification in accordance with Australian GHS Regulation

Acute toxicity: Category 2
H300 Fatal if swallowed

Acute toxicity: Category 2
H330 Fatal if inhaled

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

Dangerous goods classification: "Dangerous goods" for transport according to NZS 5433:1999, UN, IMDG or IATA - See Section 14.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Bendiocarb 800 g/kg Wettable Powder (WP)

Chemical Name	CAS-No.	Concentration [%]
Bendiocarb	22781-23-3	80.00
Silica, amorphous	7631-86-9	≥ 5 - ≤ 10
Other ingredients (non-hazardous) to 100 %		

SECTION 4. FIRST AID MEASURES

In case of poisoning by any exposure route contact the National Poisons and Hazardous Chemicals Information Centre, P.O. Box 913, Dunedin. Phone 0800 764 766, 0800 POISON and follow the advice given. Show this Safety Data Sheet to the doctor.

4.1 Description of first aid measures

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.

Skin contact

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. 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. Get medical attention if irritation develops and persists.



Ingestion

Call a physician or poison control center immediately. Rinse mouth. Induce vomiting only, if: 1. patient is fully conscious, 2. medical aid is not readily available, 3. a significant amount (more than a mouthful) has been ingested and 4. time since ingestion is less than 1 hour. (Vomit should not get into the respiratory tract.)

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

Local: The product causes irritation of eyes, skin and mucous membranes.

Systemic: Bradycardia, Sweating, Convulsions, Nausea, lachrymation, Salivation, Vomiting, Diarrhoea, Miosis, Hypotension, Bronchial hypersecretion, Myoclonus, Respiratory paralysis, Somnolence, Coma, Respiratory failure, Hypothermia, Fibrillation, Spasm

4.3 Indication of any immediate medical attention and special treatment needed

Risks

This product is a cholinesterase inhibitor carbamate.

Treatment

Systemic treatment: Initial treatment: symptomatic. In case of ingestion a gastric lavage within the first hour after ingestion and after intubation only with consecutive application of activated charcoal and sodium sulphate should be performed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. Keep respiratory tract clear. Oxygen or artificial respiration if needed. The following antidotes are generally accepted: atropin and oximes. Recovery is spontaneous and without sequelae.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire the following may be released: Carbon dioxide (CO₂), Carbon monoxide (CO), Hydrogen cyanide (hydrocyanic acid), Methyl isocyanate.

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

Contain the spread of the fire-fighting media. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazchem Code 2X



SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions

Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. Remove all sources of ignition.

6.2 Environmental precautions

Retain and dispose of contaminated wash 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.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect and transfer the product into a properly labelled and tightly closed container. Clean floors and contaminated objects with plenty of water.

Additional advice

Check also for any local site procedures.

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

Avoid dust formation. Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

Dust may form explosive mixture in air.

Hygiene measures

When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Wash hands immediately after work, if necessary take a shower.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep out of the reach of children. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from freezing. Store in original container.

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
Silica, amorphe (Respirable dust.)	7631-86-9	2 mg/m3 (TWA)	12 2011	AU NOEL

8.2 Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

Wear a compressed air respirator (continuous flow) conforming to European Norm EN14594 or EN14593-1 or equivalent or a particle filter mask (protection factor 40) conforming to EN136P3 or equivalent.

Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	Protective gloves complying with EN 374.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 6 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.

Engineering Controls

Advice on safe handling

Avoid dust formation. Use only in area provided with appropriate exhaust ventilation.



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Powder
Colour	Beige
Odour	weak, characteristic
pH	4.5 – 7.5 at 1 % (23 °C) (deionised water)
Minimum ignition energy	< 3 mJ (23 °C)
Lower explosion limit	30 g/m ³
Bulk density	ca. 0.25 g/ml (loose)
Water solubility	miscible
Partition coefficient: n-octanol/water	Bendiocarb: log Pow: 1.7 at 25°C

9.2 Other information

Further safety related physical-chemical data are not known

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition from 150 °C, Heating rate: 3 K/min, Decomposition energy: 450 KJ/kg
Exothermic decomposition.
from 120 °C, Heating rate: 0.05 K/min
Exothermic decomposition.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid Heat, flames and sparks.
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) > 50 mg/kg

Acute inhalation toxicity LC50 (Rat) 0.313 mg/L
Exposure time 6 h

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Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	No eye irritation (rabbit)
Sensitisation	Non-sensitising. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

Assessment mutagenicity

Bendiocarb was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Bendiocarb was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Bendiocarb did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Bendiocarb did not cause developmental toxicity in a two-generation study in rats.

Assessment STOT Specific target organ toxicity – repeated exposure

Bendiocarb caused reversible cholinesterase inhibition without long term effects in animal studies.

Aspiration hazard

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

Information on likely routes of exposure

Toxic by inhalation.
Harmful if absorbed through skin. Irritating to skin.
Mild eye irritation.
Toxic if swallowed.

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.



HSNO classifications

6.1B (All), 6.1B (O), 6.1C (I), 6.1D (D), 6.9A (All),
Fatal if swallowed.
Toxic if inhaled.
Harmful in contact with skin.
Causes damage to organs from repeated oral exposure.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (*Cyprinodon variegatus* (sheepshead minnow)) 0.86 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient bendiocarb.

Toxicity to aquatic invertebrates

EC50 (*Daphnia magna* (Water flea)) 0.0377 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient bendiocarb.

Toxicity to aquatic plants

EC50 (*Raphidocelis subcapitata* (freshwater green alga)) 0.408 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient bendiocarb

12.2 Persistence and degradability

Biodegradability

Bendiocarb: Not rapidly biodegradable

Koc Bendiocarb: Koc: 33

12.3 Bioaccumulative potential

Bioaccumulation

Bendiocarb: Bioconcentration factor (BCF) 6.0
Does not bioaccumulate

12.4 Mobility in soil

Mobility in soil

Bendiocarb: Mobile in soils

12.5 Other adverse effects

Additional ecological information

No other effects to be mentioned.

HSNO classifications

9.1A (All), 9.1A (F), 9.3A, 9.4A.
Very toxic to aquatic life.
Very toxic to terrestrial vertebrates.
Very toxic to terrestrial invertebrates.



SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:

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.

SECTION 14. TRANSPORT INFORMATION

ADG

UN-Number	2757
Class	6.1
Subsidiary Risk	None
Packaging group	II
Description of the goods	CARBAMATE PESTICIDE, SOLID, TOXIC (BENDIOCARB MIXTURE)
Hazchem Code	2X

IMDG

UN-Number	2757
Class	6.1
Subsidiary Risk	None
Packaging group	II
Description of the goods	CARBAMATE PESTICIDE, SOLID, TOXIC (BENDIOCARB MIXTURE)

IATA

UN-Number	2757
Transport hazard class(es)	6.1
Subsidiary Risk	None
Packaging group	II
Environmental Hazard mark	NO
Description of the goods	CARBAMATE PESTICIDE, SOLID, TOXIC (BENDIOCARB MIXTURE)

SECTION 15. REGULATORY INFORMATION

EPA approval number APPROVED PURSUANT TO THE HSNO ACT 1996, No. HSR000451
See www.epa.govt.nz for approval controls.

MPI Approved maintenance compound Insecticide Type B (All animal product except dairy).
www.foodsafety.govt.nz

See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Ficam® is a registered trademark of Bayer.

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

Bayer

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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.

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
AU OEL 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)
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	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	Internal Bayer CropScience "Occupational Exposure Standard"
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 notation: Absorption through the skin may be a significant source of exposure.
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	Time Weighted Average
UN	United Nations
WHO	World Health Organisation

END OF SDS