



**SAFETY DATA SHEET**  
Biflex® Mikron Insecticide

SDS #: PL06-0254-1-A  
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Version 1

**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

**Product Name** Biflex® Mikron Insecticide  
**Product Code(s)** PL06-0254-1-A  
**Active Ingredient(s)** Bifenthrin, Acetamiprid  
**Chemical Family** Pyrethroid Pesticide, Neonicotinoid  
**Recommended Use:** Insecticide  
**Restrictions on use** Use as recommended by the label.  
**Manufacturer** FMC Australasia Pty Ltd  
Building B' Level 2, 12 Julius Avenue,  
NORTH RYDE, NSW 2113  
Australia  
Telephone: 1800 066 355 (Customer service 1800 901 939)  
Telefax: 1800 355 896  
**Emergency telephone** 1800 033 111 (Transport Emergency)  
1800 033 111 (24 hr Emergency Medical Information)

**Section 2: HAZARDS IDENTIFICATION**

**GHS Classification**

Acute toxicity - Oral	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity — repeated exposure	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

**Label Elements**



**Signal Word**

**Danger**

**Hazard Statements**

H302 - Harmful if swallowed  
H351 - Suspected of causing cancer  
H372 - Causes damage to organs through prolonged or repeated exposure  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements - Prevention**

P260 - Do not breathe dust/fume/gas/mist/vapours/spray  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P273 - Avoid release to the environment  
 P281 - Use personal protective equipment as required

**Precautionary Statements - Response**

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
 P330 - Rinse mouth  
 P308 + P313 - IF exposed or concerned: Get medical advice/ attention  
 P391 - Collect spillage

**Precautionary Statements - Storage**

P405 - Store locked up

**Precautionary Statements - Disposal**

P501 - Dispose of contents/container according to label directions

**Other Information**

No additional information available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Mixture.

Chemical name	CAS-No	Weight percent
Bifenthrin	82657-04-3	6
Acetamiprid	135410-20-7	5
Propylene Carbonate S	108-32-7	5-15

### Section 4: FIRST AID MEASURES

**Inhalation**

Move to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

**Eye Contact**

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison information centre 13 11 26 or doctor for treatment advice.

**Ingestion**

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not induce vomiting or give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

**Most important symptoms and effects, both acute and delayed**

Central nervous system effects.

Use personal protective equipment. See Section 8 for more detail.

**Indication of immediate medical attention and special treatment needed, if necessary**

Treat symptomatically.

Notes to doctor: A specific antidote for exposure to this material is not known. Gastriclavage and/or the administration of activated charcoal can be considered. Afterdecontamination, treatment should be directed at the control of symptoms and the clinical condition.

## Section 5: FIREFIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Water spray, dry chemical, carbon dioxide (CO <sub>2</sub> ), or foam. Avoid heavy hose streams.
<b>Unsuitable extinguishing media</b>	No information available.
<b>Specific Hazards Arising from the Chemical</b>	Thermal decomposition can lead to release of irritating gases and vapours.
<b>Hazardous Combustion Products</b>	Carbon oxides, Hydrogen chloride, Hydrogen fluoride, Chlorine, Fluorine.
<b>Protective equipment and precautions for firefighters</b> <b>HAZCHEM Emergency Action Code</b>	Isolate fire area. Evaluate upwind. Dike to prevent runoff. As in any fire, wear self-contained breathing apparatus and full protective gear. 3Z

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	<p>It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should be available.</p> <p>In case of large spill (involving 1 tonnes of the product or more):</p> <ol style="list-style-type: none"> <li>1. use personal protection equipment (see Section 8)</li> <li>2. call emergency telephone number in Section 1.</li> <li>3. Alert authorities.</li> </ol> <p>Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill this may mean wearing respirator, face mask or eye protection, chemical resistant clothing, gloves and rubber boots. Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area.</p>
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	Contain the spill to prevent any further contamination of surface, soil or water. Wash waters must be prevented from entering surface water drains. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.
<b>Methods for Containment</b>	It is recommended to consider possibilities to prevent damaging effects of spills, such as bunding or capping. Use non-sparking tools and equipment. Nearby surface water drains should be covered. Minor spills on the floor or other impervious surface should immediately be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with detergent and water. Do not let wash liquid enter drains or waterways. Absorb wash liquid with an inert absorbent such as universal binder, Fuller's earth, bentonite or other absorbent clay and collect in suitable containers. The used containers should be properly closed and labelled.
<b>Methods for cleaning up</b>	<p>If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with damp cloth and/or strong industrial detergent with much water. Absorb wash liquid onto a suitable absorbent such as universal binder, attapulgate, bentonite or other absorbent clays and transfer contaminated absorbent to suitable containers. The used containers should be properly closed and labelled.</p> <p>spills which soak into the ground should be dug up and transferred to suitable containers. in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal.</p>

## Section 7: HANDLING AND STORAGE

<b>Handling</b>	In an industrial environment, it is recommended to avoid any personal contact with the product, if possible, using remotely controlled systems with remote control. Otherwise, it is recommended to process the material with maximum mechanical means. Adequate ventilation or local exhaust ventilation is required. Exhaust gases must be filtered or treated differently. For personal protection in this situation, see Section 8. Remove contaminated clothing and shoes. Wash thoroughly after handling. Use protective gloves made from chemicals such as nitrile or neoprene. Wash gloves with soap and water before reuse. Check regularly for leaks. Do not dispose into the environment. Do not contaminate water when disposing of the flushing water for equipment. Collect all waste and residues from cleaning equipment, etc. And dispose of them as hazardous waste. See Section 13 for disposal.
<b>Storage</b>	The product is stable under normal conditions of warehouse storage. Protect against extremes of heat and cold. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading "POISON" is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.
<b>Materials to avoid</b>	Strong oxidising agents. Strong acids. Strong bases.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

Contains no substances with occupational exposure limit values.

### **Engineering measures**

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

### Personal protective equipment

#### **Respiratory Protection**

The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.

#### **Hand Protection**

Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

#### **Eye/Face Protection**

When opening the container and preparing spray, wear goggles and a disposable fume face mask covering mouth and nose.

#### **Skin and Body Protection**

When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves, goggles and a disposable fume face mask covering mouth and nose.

#### **Hygiene measures**

Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Viscous liquid, crystalline solid, or waxy solid
<b>Odour</b>	Very faint, Slightly sweet.
<b>Colour</b>	Clear Pale yellow
<b>Odour threshold</b>	No information available
<b>pH</b>	5.51@ 25°C (1% aqueous solution)
<b>Melting point/freezing point</b>	No information available
<b>Boiling point/boiling range</b>	No information available

Flash point	110 °C / 230 °F
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit	No information available
Vapour pressure	No information available
Vapour density	No information available
Specific gravity	1.0648 g/L
Water solubility	No information available
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Molecular weight	No data available
Density	8.89 lb/gal @ 23 °C
Bulk density	No information available

## Section 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	None under normal use conditions.
<b>Stability</b>	Stable under recommended storage conditions
<b>Hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerisation</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Heat, flames and sparks.
<b>Incompatible products</b>	Strong oxidising agents. Strong acids. Strong bases.
<b>Hazardous Decomposition Products</b>	Carbon oxides, Hydrogen chloride, Hydrogen fluoride. Chlorine. Fluorine.

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Numerical measures of toxicity - Product Information

<b>LD50 Oral</b>	1035 mg/kg (rat) (Based on a similar product)
<b>LD50 Dermal</b>	> 5000 mg/kg (rat) (Based on a similar product)
<b>Inhalation LC50</b>	> 2.2 mg/l 4 hr (rat) - Maximum attainable concentration (zero mortality) (Based on a similar product)
<b>Skin corrosion/irritation</b>	Non-irritating. (rabbit). (Based on a similar product).
<b>Serious eye damage/eye irritation</b>	Non-irritating (rabbit). (Based on a similar product).
<b>Sensitisation</b>	Guinea pig: Non-sensitizing. (Based on a similar product).

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Mutagenicity</b>	Bifenthrin, Acetamidrid: Not genotoxic in laboratory studies.
<b>Carcinogenicity</b>	Bifenthrin: Weak response, treatment related urinary bladder benign tumors (lesions) in male mice only at the highest dose tested. Acetamidrid: No evidence of carcinogenicity from animal studies.
<b>Reproductive toxicity</b>	Bifenthrin: No toxicity to reproduction. Acetamidrid: Reductions in pup weight, litter size, viability and weaning indices; delay in sexual maturity endpoints.

<b>Developmental toxicity</b>	Bifenthrin, Acetamiprid: Not teratogenic in animal studies.
<b>STOT - single exposure</b>	Causes damage to organs. See listed target organs below.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure. See listed target organs below.
<b>Chronic toxicity</b>	Bifenthrin: Long-term exposure caused neurotoxicity (tremors and impaired gait) in the early exposure in animal studies, but tremors disappeared with continued exposure. Acetamiprid: Prolonged exposure in animal studies caused nonspecific toxicity observed as decreases in body weight and food consumption.
<b>Target organ effects</b>	Bifenthrin: Central Nervous System. Acetamiprid: No specific target organ toxicity; the liver effects were considered an adaptive response to chemicals rather than frank toxicity.
<b>Neurological effects</b>	Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure. Acetamiprid: Caused clinical signs of neurotoxicity (decreased locomotor activity, tremors) in animal studies.
<b>Symptoms</b>	Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.
<b>Aspiration hazard</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

<b>Bifenthrin (82657-04-3)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
	14-day LC50	Eisenia fetida	> 8	mg/kg soil
	LD50	Bobwhite quail	1800	mg/kg
	96 h LC50	Salmo gairdneri	0.1	µg/l
	48 h EC50	Daphnia magna	0.11	µg/l
	21 d NOEC	Daphnia magna	0.00095	µg/l
	21 d NOEC	Pimephales promelas	1.86	µg/l
	30 d NOEC	Salmo gairdneri	0.012	µg/l

<b>Acetamiprid (135410-20-7)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Acetamiprid	72 h EC50	Algae	>98.3	mg/l
	96 h LC50	Fish	>100	mg/l
	48 h LC50	Crustacea	49.8	mg/l
	21 d NOEC	Fish	19.2	mg/l
	21 d NOEC	Crustacea	5	mg/l

<b>Persistence and degradability</b>	Bifenthrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable. Acetamiprid: Non-persistent. Does not readily hydrolyze. Not readily biodegradable.
<b>Bioaccumulation</b>	Bifenthrin: The substance has a potential for bioconcentration. Acetamiprid: The substance does not have a potential for bioconcentration.
<b>Mobility</b>	Bifenthrin: Immobile. Not expected to reach groundwater. Acetamiprid: Moderately mobile.

Has some potential to reach groundwater.

**Other Adverse Effects** No information available.

## Section 13: DISPOSAL CONSIDERATIONS

**Waste disposal methods** Remaining quantities of the material and empty but unclean packaging should be regarded as hazardous waste. Dispose of as hazardous waste in compliance with local and national regulations. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

**Contaminated Packaging** Triple or preferably pressure rinse containers before disposal. Add rinsings to the 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 for appropriate disposal 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

### IMDG/IMO

<b>UN/ID no</b>	3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s (Bifenthrin)
<b>Hazard class</b>	9
<b>Packing Group</b>	III
<b>EmS</b>	F-A, S-F
<b>Environmental Hazards</b>	Yes

### ICAO/IATA

<b>UN/ID no</b>	3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s (Bifenthrin)
<b>Hazard class</b>	9
<b>Packing Group</b>	III
<b>Environmental Hazards</b>	Yes

### ADG

Transport (R) Mikron Insecticide is a non-dangerous good in Australia based on Special Provision AU01 in the Australia Dangerous good code.  
 Not dangerous goods under ADG code when being transported in IBCs or other receptacles < 500 kg (Special Provision AU01).

### **Special Transport Requirements**

Matters needing attention for transportation

Marine Pollutants in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 L or less for liquids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code and IATA special provision A197

## Section 15: REGULATORY INFORMATION

SUSMP: S6.

### International Inventories

A food, food additive, drug, cosmetic, or device, when manufactured, processed or distributed in commerce for use as a food, food

additive, drug, cosmetic, or device may not be subject to local notification requirements. Check local regulations for more information.

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Bifenthrin 82657-04-3				X	X	X		
Acetamiprid 135410-20-7					X	X		
Propylene Carbonate S 108-32-7	X	X	X	X	X	X	X	X

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

## Section 16: OTHER INFORMATION

Prepared By FMC Corporation

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**End of Safety Data Sheet**