



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

Suitable Extinguishing Media	Water spray, dry chemical, carbon dioxide (CO ₂), or foam. Avoid heavy hose streams.
Unsuitable extinguishing media	No information available.
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous Combustion Products	Carbon oxides, Hydrogen chloride, Hydrogen fluoride, Chlorine, Fluorine.
Protective equipment and precautions for firefighters HAZCHEM Emergency Action Code	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

Personal Precautions	<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"> 1. use personal protection equipment (see Section 8) 2. call emergency telephone number in Section 1. 3. Alert authorities. <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>
Other	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
Environmental Precautions	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.
Methods for Containment	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.
Methods for cleaning up	<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

Handling	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.
Storage	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.
Materials to avoid	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

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

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

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Numerical measures of toxicity - Product Information

LD50 Oral	1035 mg/kg (rat) (Based on a similar product)
LD50 Dermal	> 5000 mg/kg (rat) (Based on a similar product)
Inhalation LC50	> 2.2 mg/l 4 hr (rat) - Maximum attainable concentration (zero mortality) (Based on a similar product)

Skin corrosion/irritation	Non-irritating. (rabbit). (Based on a similar product).
Serious eye damage/eye irritation	Non-irritating (rabbit). (Based on a similar product).
Sensitisation	Guinea pig: Non-sensitizing. (Based on a similar product).

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

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

Developmental toxicity	Bifenthrin, Acetamiprid: Not teratogenic in animal studies.
STOT - single exposure	Causes damage to organs. See listed target organs below.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure. See listed target organs below.
Chronic toxicity	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.
Target organ effects	Bifenthrin: Central Nervous System. Acetamiprid: No specific target organ toxicity; the liver effects were considered an adaptive response to chemicals rather than frank toxicity.
Neurological effects	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.
Symptoms	Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

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

Bifenthrin (82657-04-3)				
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

Acetamiprid (135410-20-7)				
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

Persistence and degradability	Bifenthrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable. Acetamiprid: Non-persistent. Does not readily hydrolyze. Not readily biodegradable.
Bioaccumulation	Bifenthrin: The substance has a potential for bioconcentration. Acetamiprid: The substance does not have a potential for bioconcentration.
Mobility	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

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

ICAO/IATA

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

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End of Safety Data Sheet