SAFETY DATA SHEET

Date of Issue: July 2015
SDS No. FMC/FSC120/2

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FURY 120 SC GENERAL HOUSHOLD INSECTICIDE

Other Names: Bifenthrin + Alpha-cypermethrin.
Use: General pest insecticide for use in industrial, commercial and domestic areas.
Restriction of Use See Section 15

NZ Supplier: Garrards Pty Ltd.
Address: Unit 4,27b Cain Rd
Penrose, Auckland, New Zealand

Telephone: +64 9 526 5232
Fax Number: +64 9 526 4272

NZ Emergency Telephone: 0800 764 766 (National Poison Centre)

Manufacturer: FMC Australasia Pty Ltd.
Address: 12 Julius Avenue North Ryde NSW 2113 Australia.
Telephone Number: +61 2 98870900
Fax Number: +61 2 90070922

Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

This substance is hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

EPA Approval No: TBA

Pictograms:

Toxic **Chronic** **Ecotoxic**

Signal Word: WARNING

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Category 4
6.9B	H373	May cause damage to through prolonged	Category 2

		or repeated exposure.	
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Category 1
9.2C	H423	Harmful to the soil environment.	-
9.3B	H432	Toxic to terrestrial vertebrates.	-
9.4A	H441	Very toxic to terrestrial invertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe gas,vapours, mist or spray.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage Code	Storage Statement
None Allocated	DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in closed original containers, in a cool, well ventilated area away from children, animals, food and feedstuffs. Do not store for prolonged periods in direct sunlight.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	*CAS NUMBER*	*PROPORTION*
Bifenthrin	82657-04-3	80 g/L
Alpha-cypermethrin	67375-30-8	40 g/L
Propylene glycol	57-55-6	1-10%
Other ingredients determined not to be hazardous	mixture	Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Swallowed: Rinse mouth. Call a POISON CENTER (0800 764 766) or doctor/physician if you feel unwell.

Eye: If in eyes, hold eyes open and flush with water until chemical is removed. If irritation occurs and persists, obtain medical attention.

Skin: If on skin immediately wash with plenty of soap and water. Remove contaminated clothing. If irritation occurs and persists see a doctor. Launder contaminated clothing before re-use.

Inhaled: Remove patient to fresh air. If breathing discomfort occurs, obtain medical attention.

Advice to Doctors: This product has a moderate to high acute oral toxicity and low dermal and inhalation toxicity. It is not irritating to the eyes and skin, and non-sensitizing to the skin. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Considered low risk due to water content, however upon evaporation of water the product is combustible. Low risk of explosion if involved in a fire.

Extinguishing media: Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff. Preferred extinguishing media: alcohol resistant foam, CO_2 or dry chemical. Soft stream water fog if no alternatives. DO NOT use water jet. Contain all runoff.

Hazards from combustion products: Product is likely to decompose after heating to dryness and continued strong heating and will emit toxic fumes.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), and elbow length chemical resistant gloves. Large spills should be dyked or covered to prevent dispersal. Vacuum shovel or pump spilled material into an approved container and dispose of as listed in section 13.

In the case of spillage, stop leak if safe to do so, and contain spill. Absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated in section 13. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons.

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Read label before use. Ensure containers are kept closed until using product. Harmful if swallowed. Do not breathe in vapours, mist or spray. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), and elbow length chemical resistant gloves. In addition, if applying by low pressure hand wand, wear cotton overalls over normal clothing, buttoned to the neck and wrist and a washable hat, chemical resistant gloves and a half face piece respirator with organic vapour/gas cartridge or canister. Wash hands after use. After each day's use, wash gloves, respirator and if rubber wash with detergent and warm water, and contaminated clothing. Do not allow to enter waterways.

SECTION 7 HANDLING AND STORAGE (Continued)

Conditions for Safe Storage: DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in closed original containers, in a cool, well ventilated area away from children, animals, food and feedstuffs. Do not store for prolonged periods in direct sunlight.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance		TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
Acetic acid	[64-19-7]	10	25	15	37
Propylene Glycol	[57-55-6]				
vapour & particulates		150	474	-	-
particulates only		-	10	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA*).The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

Biological Limit Values:
No biological limit allocated.

Engineering controls:
Use in well ventilated area only. Ventilate all transport vehicles prior to unloading. Keep containers closed when not in use.

Personal Protective equipment (PPE):
General: When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), and elbow length chemical resistant gloves. In addition, if applying by low pressure hand wand, wear cotton overalls over normal clothing, buttoned to the neck and wrist and a washable hat, chemical resistant gloves and a half face piece respirator with organic vapour/gas cartridge or canister. Wash hands after use. After each day's use, wash gloves, respirator and if rubber wash with detergent and warm water, and contaminated clothing.

Personal Hygiene: Poisonous if swallowed. Avoid contact with skin. Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Off white liquid suspension.
Odour	Mild odour
Odour Threshold	Not applicable
pH	4 - 6
Boiling Point	Not applicable
Melting Point	Not applicable
Freezing Point	Not applicable
Flash Point	Not flammable.
Flammability	Not flammable.
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Vapour Density	Not applicable
Specific Gravity	1.0 g/ml
Solubilities	Product emulsifies in water
Partition Coefficient:	Not applicable
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not applicable
Kinematic Viscosity	Not applicable
Particle Characteristics	Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight.

Incompatible materials: Can react with strong oxidising agents and acids.

Hazardous decomposition products: Product is likely to decompose after heating to dryness and continued strong heating and will emit toxic fumes.

Hazardous reactions: Will not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Effects:

Swallowed	Harmful if swallowed. Mixture Calculation = LD^{50} = 354mg/kg
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure.

Potential Health Effects:
No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Acute

Swallowed: This product is toxic if swallowed; the acute oral LD_{50} (rat) > 50 - < 300 mg/kg.

Eye: Not irritating to the eyes.

Skin: This product has a low dermal toxicity. The dermal LD_{50} in the rabbit is > 2000 mg/kg. It is non irritating and non-sensitising to the skin.

Inhaled: Low inhalation toxicity. Acute inhalation LC_{50} > 1.02 mg/L/4 hrs (Similar product), which was the highest attainable concentration.

Chronic: No data is available for the formulation. In studies with laboratory animals, bifenthrin and alpha-cypermethrin did not cause reproductive toxicity, teratogenicity, or carcinogenicity. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations.

SECTION 12 ECOLOGICAL INFORMATION

HSNO Classes: 9.1A = Very toxic to aquatic life with long lasting effects.
9.2C = Harmful to the soil environment.
9.3B = Toxic to terrestrial vertebrates.
9.4A = Very toxic to terrestrial invertebrates.

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Environmental toxicity data are based on the active constituents, bifenthrin and alpha-cypermethrin. The physical and environmental properties as well as the environmental toxicology of Alpha-cypermethrin are similar to cypermethrin. Unless indicated the information below pertains to cypermethrin.

Environmental Toxicology: Bifenthrin, is highly toxic to fish and aquatic arthropods with LC_{50} values ranging from 0.0038 µg/L to 17.8 µg/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on molluscs at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds with LC_{50} values range from 1800 mg/kg to > 2,150 mg/kg. Do not contaminate sewers, drains, dams, creeks or any other waterways with product or the used container.

Cypermethrin is rapidly degraded in soil with a half-life of 2 to 4 weeks. It is readily hydrolysed under basic conditions (pH=9), but under acid or neutral conditions, hydrolysis half-life can be 20 to 29 days. Cypermethrin has a high affinity for organic matter and a Log P_{ow} of 5.0; yet because of the ease with which the material undergoes degradation, it has a very low potential for bioaccumulation and is not mobile in soil.

Environmental Properties: Bifenthrin, degrades at a moderate rate in agricultural soils ($t_{½}$ = 50 to 205 days), and more rapidly on the surface of bare soils ($t_{½}$ = 7 to 62 days). Bifenthrin is tightly bound in most soils and has extremely low water solubility.

Alpha-cypermethrin is considered highly toxic to fish and aquatic arthropods and has LC_{50} values which range from 0.93 µg/L to 2.8 µg/L. Care should be taken to avoid contamination of the aquatic environment. Cypermethrin is slightly toxic to birds and oral LD_{50} values are greater than 10,248 mg/kg. Do not contaminate sewers, drains, dams, creeks or any other waterways with product or the used container.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of as a hazardous waste in accordance with national and local regulations. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers.

Vacuum, shovel or pump waste into an approved drum. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of local and national regulations.

Dangerous to Fish: Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

Disposal of empty, non-returnable 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 containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. 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 container below 500 mm 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. Empty containers and product should not be burnt. Do not re-use empty containers.

SECTION 14 TRANSPORT INFORMATION

Transport: This product is classified as a Dangerous Good. UN 3352 PYRETHROID PESTICIDE, LIQUID, TOXIC. Class 6.1, Hazchem 2X. Packaging Group III. Hazard Identification Number (HIN) 66.

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Road and Rail Transport

UN No: 3352
Class-primary 6.1
Packing Group III
Sub Class 9
Proper Shipping Name: PYRETHROID PESTICIDE, LIQUID, TOXIC

Air Transport
UN No: 3352
Class-primary 6.1
Packing Group III
Sub Class 9
Proper Shipping Name: PYRETHROID PESTICIDE, LIQUID, TOXIC

Marine Transport
UN No: 3352
Class-primary 6.1
Packing Group III
Sub Class 9
Proper Shipping Name: PYRETHROID PESTICIDE, LIQUID, TOXIC

SECTION 15 REGULATORY INFORMATION

EPA Approval Code: TBA

HSNO Classification: 6.1D (oral), 6.9B, 9.1A, 9.2C, 9.3B, 9.4A

HSNO Controls:
Trigger quantities for this substance:

	Trigger Quantity
Approved Handler	Any Quantity
Location Certificate	Not required
Tracking Trigger Quantities	Any Quantity
Signage Trigger Quantities	100L
Emergency Response Plan	100L
Secondary Containment	100L
Restriction of Use	See controls

SECTION 16 OTHER INFORMATION

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

Disclaimer

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