



MATERIAL SAFETY DATA SHEET

BIOTIS ALPHA 100 INSECTICIDE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	BIOTIS ALPHA 100 INSECTICIDE
Product Type	Group 3A Insecticide
Company Name	BIOTIS LIFE SCIENCE PTY LTD
Address	11 Norfolk Way, North Ryde, NSW 2113, Australia.
Telephone Number	02 9889 1995
Fax Number	02 9889 1998
Recommended Use	Controls insect pests of cereals, cotton, grain legumes, oilseeds, pastures, pome and stone fruits, trees & ornamentals, tobacco & vegetables as specified in the directions for use table.

2. HAZARDS IDENTIFICATION

Hazard Classification	Classified as hazardous according to the criteria of NOHSC Australia. Not classified as Dangerous Goods according to the ADG code.
Risk Phrase(s)	R22 Harmful if swallowed. R48/22 Harmful: Danger of serious damage to health by prolonged exposure if swallowed.
Safety Phrase(s)	S2 Keep out of reach of children. S36/37 Wear suitable protective clothing and gloves. S45 In case of accident or if you feel unwell seeks medical advice immediately.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS Number</u>	<u>Proportion</u>
Alpha cypermethrin	67375-30-8	100 g/L
Liquid Hydrocarbon	64742-94-5	735 g/L
Others	-	Balance

4. FIRST AID MEASURES

Inhalation

Remove affected person to fresh air until recovered.

Skin Contact

Wash affected areas thoroughly with soap and water. If irritation persists, seek medical advice.

Eye Contact

If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.

Seek medical advice immediately.

Ingestion

If swallowed, do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre (Phone number: 13 112). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Water fog, foam, carbon dioxide or dry chemical. Avoid using large volume of water which spread the product.

Hazardous from Combustion Products

Although material is not flammable, the concentrate is combustible. If involved in fire, it will emit carbon monoxide and possibly hydrogen chloride.

Special Protective Equipment for Fire Fighters

Breathable air apparatus and protective clothing must be worn if material is involved in fires especially in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

Spills and Disposal

Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite).

Collect spilled material and waste in sealable open-top type containers for disposal.

Dispose of at a landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.

Environmental Precautions

Prevent from entering drains, waterways or sewers.

7. HANDLING AND STORAGE

Handling

For personal protective equipment (PPE) and hygiene advice, refer Section 8.

Storage

Store in the closed original container in a dry, well-ventilated area out of direct sunlight.

Keep container tightly sealed and do not store with seed, fertilizers or foodstuffs.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards

No exposure standard has been established for this product. The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m³; 17 ppm TWA, as total hydrocarbon.

Engineering Controls

Natural ventilation is sufficient when handling concentrate and preparing spray solution.

Personal Protective Equipment

When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and goggles.

Hygiene Measures

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear amber liquid
Odor	Aromatic odour
Physical state	Liquid
pH (1%v/v)	5±1
Solubility in Water	Emulsifiable in water
Flammability	Combustible liquid C1
Vapour pressure	Not available

10. STABILITY AND REACTIVITY

Stability	Stable for at least 2 years under normal conditions of warehouse storage.
Incompatible Material	Strong acids, bases and oxidizing agents
Hazardous Decompositions Product	Combustion or thermal decomposition will evolve toxic and irritant vapours.
Hazardous Polymerization	Hazardous polymerization is not possible.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

No harmful effects are expected if the precautions on the label and this MSDS are followed.

Inhalation

May cause irritation to the respiratory tract. Breathing vapour can result in headaches, dizziness and possible nausea. Breathing in high concentrations of vapour can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness.

Ingestion

The concentrate is harmful if swallowed. Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.

Skin

May irritate the skin.

Exposure to alpha-cypermethrin can result in sensations of tingling especially in the face. The effects are transient and generally disappear in one to two days. Topical application of vitamin E cream is effective in reducing discomfort.

The occurrence of facial sensations is an indication of exposure. Under these circumstances work practices should be reviewed.

Eye

The concentrate will cause irritation of the eyes.

Chronic Effects

Repeated exposure could result in peripheral nervous system damage.

Carcinogenicity

No carcinogenic status has been established for pyrethroids.

Acute Toxicity-Oral : LD₅₀ (rat) : 79-400 mg/kg (technical)

Acute Toxicity-Dermal : LD₅₀ (rat) : > 2000 mg/kg (technical)

LD₅₀ (rabbits) : > 2000 mg/kg (technical)

Acute Toxicity-Inhalation : LC₅₀ Inhalation (rat) : > 0.32 mg/L (4 hours)

Eye Irritation

Mild eye irritant

Skin Irritation

Mild skin irritant

Other Information

The Australian Acceptable Daily Intake (ADI) for alpha-cypermethrin for a human is 0.05 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 4.7 mg/kg/day, the level determined to show no effects during long-term exposure for the most sensitive indicators and the most sensitive species.

(Ref: Comm. Dept. of Health and Ageing, \pm ADI List ϕ TGA, December 2008)

12. ECOLOGICAL INFORMATION

Persistence/Biodegradability

Average field half-life of alpha-cypermethrin is 90 days. Alpha-cypermethrin is readily biodegrades in soil.

Mobility

Alpha-cypermethrin is immobile in soil.

Environmental Fate (Exposure)

Alpha-cypermethrin is readily degraded by microorganisms.

Known Harmful Effects on the Environment

Alpha-cypermethrin products do not appear to pose any threat to birds. The product is a marine pollutant for sea transport. Alpha-cypermethrin is toxic to fish.

Acute Toxicity-Fish	Highly toxic to fish LC ₅₀ (96 h) Rainbow trout: 0.0028 mg/L No toxic effect observed to fish under field conditions.
Acute Toxicity-Daphnia	Highly toxic to Daphnia EC ₅₀ (48 h) Daphnia: 0.1 ó 0.3µg/L
Acute Toxicity-Bird	Non toxic to birds LD ₅₀ Quail and Mallard ducks: > 10000 mg/kg
Acute Toxicity-Bees	Toxic to bees LD ₅₀ Bees (24 h): 0.059 µg/bee
Other beneficial spp.	LD ₅₀ Earthworms (14 d): >100mg/kg artificial soil

13. DISPOSAL CONSIDERATIONS

Product Disposal

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals.

Container Disposal

Do not use this container for any other purpose. Triple rinse containers; add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations.

Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for the refill or storage. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree root.

Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

Considered non-dangerous for transport by Australian Code for the Transport of Dangerous Goods by Road and Rail.

UN Number (Sea Transport)	3082
IMO Class/Packing Group	Class 9; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (CONTAINS Alpha-cypermethrin)

15. REGULATORY INFORMATION

Poisons Schedule	S6
Packaging and Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

16. OTHER INFORMATION

This MSDS 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 must review this information in the specific context of the intended application. BIOTIS LIFE SCIENCE PTY LTD. will not be responsible for damages of any nature resulting from use of or reliance upon this information.