

MATERIAL SAFETY DATA SHEET

Reslin® Thermal Fogging and ULV Insecticide Concentrate

Date of Issue: October 15, 2002

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Reslin® Thermal Fogging and ULV Insecticide Concentrate

Other names: None

Product code: AE F030356 02 EC46 A1

SAP product code: 131954 (1 L), 998575 (5 L), 131989 (20 L)

Recommended use: A liquid insecticide concentrate for indoor and outdoor use by commercial pest control operators.

Supplier: Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd ABN 87 000 226 022

Address: 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia

Telephone: (03) 9248 6888

Facsimile: (03) 9248 6800

Website: www.cropscience.com.au

Contact: Technical Manager (03) 9248 6854

Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

May irritate eyes and skin. Flammable.

Hazard designation: Hazardous according to criteria of Worksafe Australia.

Risk phrases: R65 – Harmful: May cause lung damage if swallowed.

Safety phrases: Not applicable

ADG classification: Not “dangerous goods” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

SUSDP classification: Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L):
Bioresmethrin	[28434-01-7]	50
Piperonyl butoxide	[51-03-6]	400
Hydrocarbon solvent	[64742-94-5]	370
Other ingredients	(not hazardous)	160

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

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- Inhalation:** Remove person to fresh air. Seek medical advice if exposure has been more than trivial.
- Skin contact:** Remove all contaminated clothing and shoes. Wash off skin immediately with soap and plenty of water. Seek medical advice if irritation persists. Launder contaminated clothing before re-use.
- Eye contact:** Rinse immediately with plenty of water and seek medical advice.
- Ingestion:** Do not induce vomiting. Give a glass of water and seek immediate medical advice.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** Symptoms include headache, dizziness, drowsiness, cramps, nausea, vomiting, diarrhoea.
- Medical attention:** There is no specific antidote. Treat symptoms. This product contains a hydrocarbon solvent. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema.

5. FIRE FIGHTING MEASURES

- Extinguishing media:** Water spray, carbon dioxide, foam, dry chemical. Do not use a water jet from a fire hose.
- Hazards from combustion products:** Heating/combustion will generate oxides of carbon and nitrogen, and other irritant and toxic fumes.
- Precautions for fire fighters:** This product is a combustible liquid. Heating/combustion will generate oxides of carbon and nitrogen, and other irritant and toxic fumes. Fire fighters should wear full protective clothing and self-contained breathing apparatus. Do not release contaminated water into the environment. Keep intact containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Wear suitable protective clothing and boots. Prevent spill from entering drains, sewers or any body of water. Contain and absorb with sand, earth or inert absorbent. Scoop or shovel into sealable containers for disposal.

7. HANDLING AND STORAGE

- Handling:** Keep out of reach of children. Use only in a well-ventilated area. Store product in the closed, original container in a cool, well-ventilated area, protected from light. Avoid ingestion and inhalation. Do not apply in the presence of naked flames, hot surfaces or unprotected electrical equipment.

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Storage: Store product in the closed, original container in a cool, well-ventilated area, protected from light.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards:	No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia). The manufacturer of the hydrocarbon solvent recommends a TWA exposure limit of 100 ppm.
Engineering controls:	Control process conditions to avoid contact. Use local exhaust ventilation during manufacture.
Personal Protective Equipment:	Eyes: Chemical goggles Clothing: Full-length work clothes Gloves: PVC or nitrile gloves Respiratory: Approved pesticides respirator during spraying Other: Do not eat, drink or smoke until after washing. Wash thoroughly after handling. After each day's use wash gloves, goggles and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear yellow to pale brown liquid
Odour:	Mild aromatic odour
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point:	184°C (boiling point)
Freezing/melting point:	Not available
Solubility:	Emulsifies
Density:	0.98 at 20°C
pH:	3.0 to 5.0
Flash Point:	68°C (Abel closed cup)
Flammability (explosive) limits:	0.6 - 7.0 %
Auto-ignition temperature:	Not available
Percent volatiles:	39%
Octanol/water partition coefficient:	Not available
Formulation:	Flowable concentrate for indoor and outdoor pest control

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions. No hazards are expected if the material is handled, stored and used according to instructions and government regulations.
Hazardous polymerisation:	Not known to produce hazardous reactions.
Conditions to	Extreme heat

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avoid:

Incompatible materials: Avoid oxidising agents and alkalis.

Hazardous decomposition products: Bioresmethrin decomposes in UV light

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation: Do not breathe vapour. Inhalation of spray may produce respiratory irritation and can result in headaches, dizziness, drowsiness, and possibly nausea.

Skin contact: Mild irritant and drying to the skin. Avoid contact with skin.

Eye contact: Mild irritant

Ingestion: Harmful: May cause lung damage if swallowed. Symptoms include headache, dizziness, drowsiness, cramps, nausea, vomiting, diarrhoea.

Other: None

ANIMAL TOXICITY DATA – PRODUCT: No data available for the product.

ANIMAL TOXICITY DATA – INDIVIDUAL INGREDIENTS:

Acute:

Oral toxicity: LD₅₀ rat: 7,070 – 8,000mg/kg (bioresmethrin)
LD₅₀ rat: 5,630 mg/kg (piperonyl butoxide)

Dermal toxicity: LD₅₀ rat: > 10,000 mg/kg (bioresmethrin)
LD₅₀ rabbit: > 2,000 mg/kg (piperonyl butoxide)

Inhalation toxicity: LC₅₀ (4 h) rat: 5.28 mg/L (bioresmethrin)
LC₅₀ (4 h) rat: > 5.9 mg/L (piperonyl butoxide)

Skin irritation: Not available

Eye irritation: Not available

Sensitisation: Not available

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Chronic:

Bioresmethrin was not embryotoxic or teratogenic in animal studies.

Marginally higher incidences of benign liver tumours in mice were observed following lifetime high exposure to piperonyl butoxide. The significance of this observation is questionable and under international review. The doses at which tumours were observed greatly exceed potential human exposure from labelled uses of this product. Piperonyl butoxide is not classified as a carcinogen. One reference indicates that exposure to large amounts of piperonyl butoxide may cause blood disorders or liver damage. Piperonyl butoxide is not mutagenic. No birth defects or adverse effects on reproductive parameters were found in studies with rats and rabbits. Piperonyl butoxide is not considered to be teratogenic.

12. ECOLOGICAL INFORMATION

This product is very toxic to fish and aquatic organisms

Fish toxicity: Bioresmethrin LC₅₀: 0.00062 – 1.0 mg/L (96 h) fish
Piperonyl butoxide LC₅₀: 5.3 mg/L (24 h) carp

Daphnia toxicity: Bioresmethrin EC₅₀: 0.0008 mg/L(48 h) Daphnia

Toxicity to algae: Not available

Bird toxicity: Bioresmethrin LD₅₀: >10,000 mg/kg chickens
Piperonyl butoxide LD₅₀: >100 mg/kg starlings

Bee toxicity: Bioresmethrin: very toxic to bees
Piperonyl butoxide: not toxic to bees.

Other:

Environmental fate, persistence and degradation: Bioresmethrin degrades in light.

13. DISPOSAL CONSIDERATIONS

Follow Avcare guidelines. 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 the purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN number: Not applicable

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Proper shipping name: Not applicable
Class and Subsidiary Risk: Not "dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Packing Group: Not applicable
EPG: Not applicable
Hazchem code: Not applicable

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

National Registration Authority Approval Number: 32575

16. OTHER INFORMATION

Trademark information: Reslin[®] is a Registered Trademark of Bayer.

Preparation information: Replaces October 23, 2001 edition.
Reason for update: Conversion to 16 heading format.

Data sources: Bayer CropScience Pty Ltd product safety data and published data

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 should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace 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.

END OF MSDS