

# MATERIAL SAFETY DATA SHEET

## Starycide® Insect Growth Regulator

Date of Issue: December 18<sup>th</sup>, 2007

### 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

**Product name:** Starycide® Insect Growth Regulator  
**Other names:** None  
**Product code:** Not yet available  
**Chemical group:** Uron  
**Recommended use:** For the control silverfish, immature fleas and cockroaches in indoor and outdoor situations  
**Formulation:** Suspension Concentrate  
**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.bayercropscience.com.au](http://www.bayercropscience.com.au)  
**Contact:** Technical Manager (03) 9248 6854  
**Emergency Telephone Number:** 1800 033 111 – Orica SH&E Shared Services

### 2. HAZARDS IDENTIFICATION

**HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD**  
Irritating to eyes and skin. May cause sensitisation by skin contact.

**Hazard designation:** Classified as hazardous according to the criteria of Worksafe Australia  
**Risk phrases:** R 36/38 – Irritating to eyes and skin  
R 43 – May cause sensitisation by skin contact  
**Safety phrases:** See Sections 4, 5, 6, 7, 8, 9, 13  
**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. For transport by sea, Starycide Insect Growth Regulator is a MARINE POLLUTANT. See Section 14.  
**SUSDP classification:** Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L)
Triflumuron	[64628-44-0]	48
1,2-Benzisothiazolin-3-one	[2634-33-5]	0.6
Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	[55965-84-9]	1.1
Other ingredients (non-hazardous)	-	~1075

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### 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.**

- Inhalation:** Remove victim to fresh air and keep at rest. Seek medical advice if symptoms are experienced.
- Skin contact:** Remove any contaminated clothing and wash skin thoroughly with soap and water.
- Eye contact:** Hold eyes open and flood with water for at least 15 minutes. Seek medical advice.
- Ingestion:** The active ingredient is an insect growth regulator (chitin synthesis inhibitor) and therefore exhibits low mammalian toxicity. Seek medical advice.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** There are no specific symptoms of triflumuron toxicity known.
- Medical attention:** Systemic toxicity with this product is unlikely. In the event of ingestion apply basic aid, decontamination and symptomatic treatment. Triflumuron is a chitin synthesis inhibitor.

### 5. FIRE FIGHTING MEASURES

- Extinguishing media:** Sprayed water jet, foam, extinguishing powder, carbon dioxide, sand.
- Hazards from combustion products:** If involved in a fire: hydrogen chloride, hydrogen fluoride, hydrogen cyanide, carbon monoxide, and nitrogen oxides may be evolved.
- Precautions for fire fighters:** Fight fire in early stages if safe to do so. Wear respiratory protection. Well ventilated areas - full face mask with combination filter (offers no protection from carbon monoxide). Enclosed premises - respirator with independent air supply.
- Contain firefighting water. Do not permit firefighting water to enter drains and waterways if at all possible.

### 6. ACCIDENTAL RELEASE MEASURES

Dealing with spills and disposals may result in the potential for increased personal exposure. Protective clothing and equipment as described in the PERSONAL PROTECTION section should be worn. Avoid contact with spilled material or contaminated surfaces. Prevent spillage from spreading or entering waterways and drains. Work from upwind side of spill. Spread impregnated sawdust over spillage, sweep up and place in a sealable container. Avoid breathing the dust. Clean affected area with aqueous detergent and a small amount of water. Absorb this detergent/water with absorbent material. Do not eat, drink or smoke during clean-up operation. All possible steps should be taken to stop the product entering waterways and drains to prevent contamination of aquatic environments.

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### 7. HANDLING AND STORAGE

- Handling:** Keep out of reach of children. Keep away from heat or moisture.
- Storage:** Store away from food, drink or animal feeding stuffs. Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Exposure standards:** No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia) for the product or its ingredients.
- Engineering controls:** No engineering controls are required for the normal use of this product according to label
- Personal Protective Equipment:** When opening the container and preparing spray wear elbow length PVC gloves. Wash hands after use. After each day's use wash gloves.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Light brown to grey liquid
- Odour:** Negligible
- Vapour pressure:** Not available
- Vapour density:** Not available
- Boiling point:** Not available
- Freezing/melting point:** Not available
- Solubility:** Not available
- Density:** 1115 – 1135 g/L
- pH:** 6.0 to 8.0 (undiluted)
- Flash Point:** Not applicable
- Flammability (explosive) limits:** Not applicable
- Auto-ignition temperature:** Not applicable
- Octanol/water partition coefficient:** Not available
- Formulation:** Suspension concentrate

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### 10. STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Triflumuron undergoes thermal decomposition above 380 °C.
<b>Hazardous polymerisation:</b>	Hazardous polymerisation will not occur.
<b>Conditions to avoid:</b>	Extreme heat, oxidising agents.
<b>Incompatible materials:</b>	Not available
<b>Hazardous decomposition products:</b>	If involved in a fire: hydrogen chloride, hydrogen fluoride, hydrogen cyanide, carbon monoxide, and nitrogen oxides may be evolved.

### 11. TOXICOLOGICAL INFORMATION

#### POTENTIAL HEALTH EFFECTS

<b>Inhalation:</b>	May cause irritation to respiratory tract
<b>Skin contact:</b>	Irritating to skin
<b>Eye contact:</b>	Irritating to the eyes
<b>Ingestion:</b>	Not available
<b>Other:</b>	None

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

#### Acute:

<b>Oral toxicity:</b>	LD <sub>50</sub> rat: >5000 mg/kg
<b>Dermal toxicity:</b>	LD <sub>50</sub> rat: >5000 mg/kg
<b>Inhalation toxicity:</b>	Not irritating to mucous membrane – rabbit
<b>Skin irritation:</b>	Slightly irritating – rabbit
<b>Eye irritation:</b>	Not irritating – rabbit
<b>Sensitisation:</b>	Not available

#### Chronic:

The effects of long-term exposure to this formulation are not known. The active constituent has been shown to be non-mutagenic and non-carcinogenic in laboratory tests. There are no specific symptoms of triflumuron toxicity.

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### 12. ECOLOGICAL INFORMATION

<b>Fish toxicity:</b>	LC <sub>50</sub> : > 320 mg/L (96 h) rainbow trout (triflumuron) LC <sub>50</sub> : >100 mg/L (96 h) golden orfe (triflumuron)
<b>Daphnia toxicity:</b>	EC <sub>50</sub> : 0.23 mg/L (48 hours) daphnia magna (triflumuron)
<b>Toxicity to algae:</b>	LC <sub>50</sub> : >25 mg/L (96 hours, growth rate) <i>Scenedesmus</i> (triflumuron)
<b>Bird toxicity:</b>	LD <sub>50</sub> : 561 mg/kg bobwhite quail (triflumuron)
<b>Bee toxicity:</b>	Triflumuron is toxic to bees
<b>Other:</b>	Triflumuron is a toxic hazard to juvenile aquatic and terrestrial arthropods
<b>Environmental fate, persistence and degradation:</b>	Degradation of active constituent – half life: t <sub>1/2</sub> : 960 days at pH4 (22°C) t <sub>1/2</sub> : 580 days at pH7 (22°C) t <sub>1/2</sub> : 11 days at pH9 (22°C)

### 13. DISPOSAL CONSIDERATIONS

1) After intended use Rinse container before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Dispose of at 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 this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

2) After spill or accident: Dispose of sealed containers at an approved local waste disposal site.

### 14. TRANSPORT INFORMATION

<b>UN number:</b>	Not applicable (road/rail)
<b>Proper shipping name:</b>	Not applicable (road/rail)
<b>Class and Subsidiary Risk:</b>	Not applicable (road/rail)
<b>Packing Group:</b>	Not applicable (road/rail)
<b>EPG:</b>	Not applicable (road/rail)
<b>Hazchem code:</b>	Not applicable (road/rail)
<b>Marine pollutant:</b>	Yes - If this product is shipped by sea it is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains triflumuron), UN 3082, Packing Group III.

### 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988  
Australian Pesticides and Veterinary Medicines Authority Approval Number: 61251

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### 16. OTHER INFORMATION

**Trademark information:** Starycide® is a Registered Trademark of Bayer

**Preparation information:** Replaces May 18<sup>th</sup>, 2007 edition.  
Reason for update: Regulatory information

**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