

# Safety Data Sheet



## Starycide® Insect Growth Regulator

Version 1 / AUS  
102000017278

Revision Date: 16.07.2018  
Print Date: 16.07.2018

### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Trade name** Starycide® Insect Growth Regulator  
**Product code (UVP)** 79037848

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use** Insecticide

#### 1.3 Details of the supplier of the safety data sheet

**Supplier** Bayer Cropscience Pty Ltd  
ABN 87 000 226 022  
Level 1, 8 Redfern Road  
3123 Hawthorn East  
Victoria  
Australia

**Telephone** (03) 9248 6888

**Telefax** (03) 9248 6800

**Responsible Department** 1800 804 479 Technical Information Service

**Website** [www.environmentalscience.bayer.com.au](http://www.environmentalscience.bayer.com.au)

#### 1.4 Emergency telephone no.

**Emergency telephone no.** 1800 033 111 IXOM Operations Pty Ltd

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification in accordance with Australian GHS Regulation

Acute aquatic toxicity: Category 1  
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1  
H410 Very toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling according to specific Australian legislation

No hazard label for supply/use required.

#### 2.3 Other hazards

No other hazards known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Chemical nature

Triflumuron 48 g/l

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Suspension concentrate (=flowable concentrate)(SC)

Chemical name	CAS-No.	Concentration [%]
Triflumuron	64628-44-0	4.29
1,2-Benzisothiazol-3(2H)-one	2634-33-5	0.05
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	0.10
Other ingredients (non-hazardous) to 100%		

### SECTION 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 Safety Data Sheet to the doctor.**

#### 4.1 Description of first aid measures

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Take off contaminated clothing and shoes immediately. If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

#### 4.2 Most important symptoms and effects, both acute and delayed

**Symptoms** No symptoms known or expected.

#### 4.3 Indication of any immediate medical attention and special treatment needed

**Treatment** Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

### SECTION 5. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable** Water spray, Foam, Dry powder, Carbon dioxide (CO<sub>2</sub>), Sand



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<b>5.2 Special hazards arising from the substance or mixture</b>	In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen fluoride, Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx)
<b>5.3 Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
<b>Further information</b>	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.
<b>Hazchem Code</b>	•3Z

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

**Precautions** Use personal protective equipment. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

**6.2 Environmental precautions** Contain contaminated water and fire fighting water. Do not allow to get into surface water, drains and ground water.

#### 6.3 Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

### SECTION 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

**Advice on protection against fire and explosion** No special precautions required.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

#### 7.2 Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers** Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store in a place accessible by authorized persons only. Protect from frost. Keep away from direct sunlight.



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**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Triflumuron	64628-44-0	0.2 mg/m <sup>3</sup> (TWA)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**8.2 Exposure controls**

**Respiratory protection**

Respiratory protection is not required under anticipated circumstances of exposure.  
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

**Hand protection**

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.  
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.  
Material Nitrile rubber  
Rate of permeability > 480 min  
Glove thickness > 0.4 mm  
Protective index Class 6  
Directive Protective gloves complying with EN 374.

**Eye protection**

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

**Skin and body protection**

Wear standard coveralls and Category 3 Type 4 suit.  
If there is a risk of significant exposure, consider a higher protective type suit.  
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.  
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

**General protective measures**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Engineering Controls**

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**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

<b>Form</b>	suspension
<b>Colour</b>	light grey to brown
<b>Odour</b>	weak, characteristic
<b>pH</b>	6.0 - 8.0 at 100 % (23 °C)
<b>Flash point</b>	none
<b>Density</b>	ca. 1.12 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	suspensive
<b>Partition coefficient: n-octanol/water</b>	Triflumuron: log Pow: 4.9 at 22 °C

**9.2 Other information** Further safety related physical-chemical data are not known.

### SECTION 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

**Thermal decomposition** Stable under normal conditions.

**10.2 Chemical stability** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.

**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.

**10.5 Incompatible materials** Store only in the original container.

**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

**Acute oral toxicity** LD50 (Rat) > 5,000 mg/kg  
Test conducted with a similar formulation.

**Acute inhalation toxicity** LC50 (Rat) > 0.215 mg/l  
Exposure time: 4 h  
Highest attainable concentration.  
Test conducted with a similar formulation.

**Acute dermal toxicity** LD50 (Rat) > 5,000 mg/kg

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	Test conducted with a similar formulation.
<b>Skin corrosion/irritation</b>	No skin irritation (Rabbit) Test conducted with a similar formulation.
<b>Serious eye damage/eye irritation</b>	No eye irritation (Rabbit) Test conducted with a similar formulation.
<b>Respiratory or skin sensitisation</b>	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test Test conducted with a similar formulation.

### Assessment mutagenicity

Triflumuron was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity

Triflumuron was not carcinogenic in lifetime feeding studies in rats and mice.

### Assessment toxicity to reproduction

Triflumuron did not cause reproductive toxicity in a two-generation study in rats.

### Assessment developmental toxicity

Triflumuron did not cause developmental toxicity in rats and rabbits.

### Assessment STOT Specific target organ toxicity – single exposure

Triflumuron: Based on available data, the classification criteria are not met.

### Assessment STOT Specific target organ toxicity – repeated exposure

Triflumuron did not cause specific target organ toxicity in experimental animal studies.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Information on likely routes of exposure

May cause irritation.  
May cause skin irritation.  
May cause eye irritation.

### Early onset symptoms related to exposure

Refer to Section 4

### Delayed health effects from exposure

Refer to Section 11

### Exposure levels and health effects

Refer to Section 4

### Interactive effects

Not known

### When specific chemical data is not available

Not applicable

### Mixture of chemicals

Refer to Section 2.1



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### Further information

No further toxicological information is available.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

<b>Toxicity to fish</b>	LC50 (Lepomis macrochirus (Bluegill sunfish)) 183 mg/l Exposure time: 96 h Test conducted with a similar formulation.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 0.00032 mg/l Exposure time: 48 h Test conducted with a similar formulation.
<b>Toxicity to aquatic plants</b>	IC50 (Desmodesmus subspicatus (green algae)) > 446 mg/l Growth rate; Exposure time: 72 h Test conducted with a similar formulation.
<b>Toxicity to other organisms</b>	LD50 (Colinus virginianus (Bobwhite quail)) 561 mg/kg The value mentioned relates to the active ingredient triflumuron.  (Apis mellifera (bees)) The value mentioned relates to the active ingredient triflumuron. Toxic to bees.

### 12.2 Persistence and degradability

**Biodegradability** Triflumuron:  
Not rapidly biodegradable

**Koc** Triflumuron: Koc: 8601

### 12.3 Bioaccumulative potential

**Bioaccumulation** Triflumuron: Bioconcentration factor (BCF) 612  
Does not bioaccumulate.

### 12.4 Mobility in soil

**Mobility in soil** Triflumuron: Immobile in soil

### 12.5 Other adverse effects

**Additional ecological information** No other effects to be mentioned.

## SECTION 13. DISPOSAL CONSIDERATIONS

Triple-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 deliver empty packaging 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.



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### SECTION 14. TRANSPORT INFORMATION

#### ADG

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLUMURON SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

#### IMDG

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLUMURON SOLUTION)

#### IATA

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLUMURON SOLUTION )

### SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994  
Australian Pesticides and Veterinary Medicines Authority approval number: 61251

#### SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

### SECTION 16. OTHER INFORMATION

**Trademark information** Starycide® is a Registered Trademark of the Bayer Group.

#### Abbreviations and acronyms





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ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
CAS-Nr.	Chemical Abstracts Service number
CEILING	Ceiling Limit Value
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN	Skin sensitizer
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

This SDS 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 SDS 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.

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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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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