

**Bayer Environmental Science**  
**Material Safety Data Sheet**  
**Starycide® Insect Growth Regulator**



Version / AUS  
102000017278

Revision Date: 03.10.2011

**SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

Product name: **Starycide® Insect Growth Regulator**  
Other names: None  
Product code (UVP): 79037848  
Recommended use: Insecticide  
  
Chemical formulation: Suspension concentrate (=flowable concentrate)(SC)  
  
Company: Bayer Environmental Science  
A Business Operation of Bayer CropScience Pty Ltd  
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**SECTION 2. HAZARDS IDENTIFICATION**

**Emergency Overview**  
HAZARDOUS SUBSTANCE DANGEROUS GOODS

Hazardous classification: Hazardous (National Occupational Health and Safety Commission - NOHSC).  
R-phrases: R36/38 - Irritating to eyes and skin.  
R43 - May cause sensitization by skin contact.  
S-phrases: See sections 4, 5, 6, 7, 8, 10, 13.  
ADG Classification: Not a "Dangerous good" 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.  
SUSMP classification (Poison Schedule): Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons).

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical nature: Triflumuron 48 g/L

| Chemical Name  | CAS-No.    | Concentration [%] |
|--|------------|-------------------|
| Triflumuron  | 64628-44-0 | 4.27              |
| 1,2-Benzisothiazol-3(2H)-one   | 2634-33-5  | 0.05              |
| Mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon and 2-Methyl-2H-isothiazol- | 55965-84-9 | 0.10              |



|  |  |  |
|--|--|--|
| 3-on                                       |  |  |
| 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 Material Safety Data Sheet to the doctor.**

**Inhalation**

Move the victim to fresh air and keep at rest. If symptoms persist, call a physician.

**Skin contact**

Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.

**Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation or redness persists, see an ophthalmologist.

**Ingestion**

Keep at rest. If symptoms persist, call a physician.

**Notes to physician**

**Treatment**

Treat symptomatically.

**SECTION 5. FIRE FIGHTING MEASURES**

**Suitable extinguishing media**

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

**Hazards from combustion products**

- In the event of fire the following may be released:
- Hydrogen chloride (HCl)
  - Hydrogen fluoride
  - Hydrogen cyanide (hydrocyanic acid)
  - Carbon monoxide (CO)
  - Nitrogen oxides (NO<sub>x</sub>)

**Precautions for fire-fighting**

- In the event of fire, wear self-contained breathing apparatus.
- Contain the spread of the fire-fighting media.
- Do not allow run-off from fire fighting to enter drains or water courses.

**Hazchem Code** •3Z



**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

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

**Environmental precautions**

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

**Methods for cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Avoid dust formation.  
Clean with detergents. Avoid solvents.

**SECTION 7. HANDLING AND STORAGE**

**Storage**

Requirements for storage areas and containers:  
Keep out of the reach of children.  
Protect against moisture.  
Keep away from direct sunlight.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

Suitable materials:  
HDPE (high density polyethylene)

**SECTION 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.

**Personal protective equipment - End user**

General advice: Eye wash facility and safety shower should be available.  
Follow all label instructions.

Respiratory protection: No personal respiratory protective equipment normally required.

Hand protection: Elbow-length PVC or nitrile gloves.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

Form: Liquid, suspension  
Colour: Tan to grey  
Odour: Slight

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**Safety data**

|   |                                     |
|---|-------------------------------------|
| pH:                                     | 6.0 - 8.0 at 100 % (20 °C)          |
| Flash point:                            | No data available                   |
| Ignition temperature:                   | No data available                   |
| Upper explosion limit:                  | No data available                   |
| Lower explosion limit:                  | No data available                   |
| Vapour pressure:                        | No data available                   |
| Relative vapour density:                | No data available                   |
| Density:                                | ca. 1.12 g/cm <sup>3</sup> at 20 °C |
| Water solubility:                       | No data available                   |
| Partition coefficient: n-octanol/water: | No data available                   |

**SECTION 10. STABILITY AND REACTIVITY**

|                                   |   |
|-----------------------------------|---|
| Conditions to avoid:              | Extremes of temperature and direct sunlight.  |
| Hazardous decomposition products: | Thermal decomposition can lead to release of:<br>Hydrogen chloride (HCl)<br>Hydrogen fluoride<br>Hydrogen cyanide (hydrocyanic acid)<br>Carbon monoxide<br>Nitrogen oxides (NO <sub>x</sub> ) |
| Hazardous reactions:              | No dangerous reaction known under conditions of normal use.   |

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Potential health effects**

|                        |   |
|------------------------|---|
| Inhalation:            | May cause irritation.   |
| Skin:                  | Irritating to skin.   |
| Eye:                   | Causes eye irritation.  |
| Acute oral toxicity:   | LD <sub>50</sub> (rat) > 5,000 mg/kg<br>The value mentioned relates to the active ingredient triflumuron. |
| Acute dermal toxicity: | LD <sub>50</sub> (rat) > 5,000 mg/kg<br>The value mentioned relates to the active ingredient triflumuron. |
| Skin irritation:       | Slight irritation (rabbit).<br>The value mentioned relates to the active ingredient triflumuron.          |



Eye irritation: No eye irritation (rabbit).  
The value mentioned relates to the active ingredient triflumuron.

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

Toxicity to fish: LC<sub>50</sub> (*Oncorhynchus mykiss* (Rainbow trout)) > 320 mg/L  
Exposure time: 96 h  
The value mentioned relates to the active ingredient triflumuron.

Toxicity to fish: LC<sub>50</sub> (*Leuciscus idus* (Golden orfe)) > 100 mg/L  
Exposure time: 96 h  
The value mentioned relates to the active ingredient triflumuron.

Toxicity to aquatic invertebrates: EC<sub>50</sub> (*Daphnia magna* (Water flea)) 0.23 mg/L  
Exposure time: 48 h  
The value mentioned relates to the active ingredient triflumuron.

Toxicity to aquatic plants: EC<sub>50</sub> (*Scenedesmus quadricauda* (Green algae)) > 25 mg/L  
Exposure time: 96 h  
The value mentioned relates to the active ingredient triflumuron.

Toxicity to other organisms: LD<sub>50</sub> (*Colinus virginianus* (Bobwhite quail)) 561 mg/kg  
The value mentioned relates to the active ingredient triflumuron.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Rinse containers 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.

**SECTION 14. TRANSPORT INFORMATION**

**ADG**

UN-Number 3082  
Class 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 3082  
Class 9  
Subsidiary Risk None  
Packaging group III

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|                          |  |
|--------------------------|--|
| EmS                      | F-A , S-F  |
| Marine pollutant         | YES  |
| Description of the goods | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.<br>(TRIFLUMURON SOLUTION) |

**IATA**

|                          |   |
|--------------------------|---|
| UN-Number                | <b>3082</b>   |
| Class                    | 9   |
| Subsidiary Risk          | None  |
| Packaging group          | III   |
| Environm. Hazardous Mark | YES   |
| Description of the goods | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.<br>(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.

See also Section 2.

**SECTION 16. OTHER INFORMATION**

**Trademark information**

Starycide® is registered trademark of Bayer.

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.

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

END OF MSDS