

MATERIAL SAFETY DATA SHEET



Date of Issue: September 17, 2004

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name Baytan[®] T Flowable Seed Dressing
Other names Baytan T FS154
Product codes and pack sizes 2666972 (10 L), 6359604 (100 L)
B15P003
Chemical group Triazole + benzoylurea
Recommended use Fungicide plus insecticide for agricultural use – seed treatment
Formulation Flowable concentrate for seed treatment (FS)
Supplier 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
Contact Development Manager (03) 9248 6888
Emergency Telephone Number 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HAZARDOUS SUBSTANCE – NON-DANGEROUS GOOD
Harmful to aquatic organisms

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases R43 - May cause sensitisation by skin contact.
Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 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.
SUSDP classification 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Triadimenol	[55219-65-3]	150
Triflumuron	[64628-44-0]	4
Isothiazolone antifungal agents	[55965-84-9]	0.02
Other ingredients, including emulsifiers, stabilizers, dye and water	(non hazardous)	946

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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 the doctor.

Inhalation	If inhaled remove to fresh air and keep at rest. Obtain medical advice.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.
Ingestion	Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice as above.
First Aid Facilities	Ensure eyewash and shower facilities are available.
Medical attention	Triadimenol is a triazole compound. Symptoms of poisoning have not been recorded. <i>Local contamination:</i> Treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as above under First Aid Measures. <i>Systemic poisoning:</i> There is no specific antidote. Treat symptoms. An aqueous suspension of activated charcoal may be administered to absorb remaining toxicant.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, foam, dry chemical, carbon dioxide, sand
Hazards from combustion products	In a fire, formation of hydrogen chloride, hydrogen cyanide, hydrogen fluoride, carbon monoxide and nitrogen oxides can be expected.
Precautions for fire fighters	Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, spray unopened containers with water to cool. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later.
Hazchem code	Not applicable

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Contain spill and absorb with earth, sand, clay, or other absorbent material. Prevent spilled material from entering drains or watercourses. Collect and store in properly labelled drums for safe disposal. Clean floor with a damp cloth and place it in the drum. Seal drums and label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority.

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7. HANDLING AND STORAGE

Handling	Keep out of reach of children. Avoid contact with eyes and skin. Do not inhale dust from grain or treated seed. Wash hands after use. Do not allow seed treated with this product to contaminate seed intended for human or animal consumption. Bags which have held treated seed are not to be used for any other purpose.
Storage	Store product in the closed original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. When treated seed is stored it should be kept apart from other grain and the bags or other containers should be clearly marked to indicate the contents have been treated with this product.
Flammability	Not flammable. No flash point up to 100° C – probably a Combustible liquid Class C1.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	The NOHSC exposure standard (TWA) for glycerin mist is: 10 mg/m ³ <i>Exposure standard – Time Weighted Average (TWA)</i> means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
Biological limit values	None allocated
Engineering controls	Control process conditions to avoid contact. Use in a well-ventilated area only.
Personal Protective Equipment	Eyes: Safety goggles if exposure is possible Clothing: Cotton overalls buttoned to the neck and wrist and a washable hat Gloves: Elbow-length PVC gloves Respiratory: If inhalation of product or dust from grain or treated seed is likely, an AS/NZS 1715/1716 approved respirator should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slightly viscous blue suspension
Odour:	Weak characteristic
pH:	6.0 to 9.0
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point:	Not available
Freezing/melting point:	Not available
Solubility:	Miscible with water
Specific Gravity:	1.1 at 20° C
Flash Point:	No flash point up to 100° C
Flammability (explosive) limits:	Not available
Auto-ignition temperature:	Not available
Partition coefficient (octanol/water):	<i>Triadimenol</i> : Log P _{ow} = 3.08 to 3.28 at 25° C <i>Triflumuron</i> : Log P _{ow} = 4.9 at 22° C

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10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Excessive heat
Incompatible materials	Oxidising agents, alkaline materials.
Hazardous decomposition products	In a fire, formation of hydrogen chloride, hydrogen cyanide, hydrogen fluoride, carbon monoxide and nitrogen oxides can be expected.
Hazardous reactions	None

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	Harmful if inhaled. May cause respiratory irritation if inhaled.
Skin contact	May irritate the skin. Repeated exposure may cause allergic disorders.
Eye contact	May irritate the eyes.
Ingestion	Harmful if swallowed.

ANIMAL TOXICITY DATA

Acute:	
Oral toxicity	LD ₅₀ rat: 689 mg/kg – (<i>triadimenol</i>) LD ₅₀ rat: > 5000 mg/kg – (<i>triflumuron</i>)
Dermal toxicity	LD ₅₀ rat: > 5000 mg/kg – (<i>triadimenol</i>) LD ₅₀ rat: > 5000 mg/kg – (<i>triflumuron</i>)
Inhalation toxicity	LC ₅₀ rat (4 hour): > 954 mg/L – (<i>triadimenol</i>)- highest attainable concentration LC ₅₀ rat (4 hour): > 1.55 mg/L (dust) – (<i>triflumuron</i>)- highest attainable concentration
Skin irritation	Non irritating (rabbit) – (<i>triadimenol</i>) Non irritating (rabbit) – (<i>triflumuron</i>)
Eye irritation	Non irritating (rabbit) – (<i>triadimenol</i>) Non irritating (rabbit) – (<i>triflumuron</i>)
Sensitisation	Not a skin sensitiser (guinea pig) (<i>triadimenol</i>) Not a skin sensitiser (guinea pig) (<i>triflumuron</i>) This product is classified as “Sensitising” according to the European criteria, as it contains a very small amount of an isothiazolone antifungal agent.

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11. TOXICOLOGICAL INFORMATION - continued

Chronic:

Animal studies with triadimenol showed no evidence of oncogenic effects, no evidence of carcinogenic effects and no teratogenic potential. Triadimenol was not mutagenic.

Triflumuron had no mutagenic activity in various *in vitro* and *in vivo* tests.

12. ECOLOGICAL INFORMATION

Triadimenol is harmful to aquatic organisms. It has a low toxicity to birds, bees and earthworms.

Triflumuron is very toxic to aquatic organisms, but it is present at a low concentration in this product. Triflumuron is toxic to bees, but used as a seed treatment according to label directions should not put hives at risk.

Baytan T Flowable Seed Dressing is harmful to fish and aquatic arthropods. DO NOT feed treated seed or otherwise expose to wildlife or domestic birds. DO NOT contaminate streams, rivers, or waterways with the chemical, used containers, treated seed or bags which have held treated seed.

Ecotoxicity

Triadimenol:

Fish toxicity: LC₅₀ (96 h) bluegill sunfish (*Lepomis macrochirus*) 15 mg/L

LC₅₀ (96 h) rainbow trout (*Onchorhynchus mykiss*) 21.3 mg/L

Daphnia toxicity: EC₅₀ (48 h) water flea (*Daphnia magna*) 51 mg/L

Algal toxicity:

Growth rate: EC₅₀ (72 h) green algae (*Pseudokirchneriella subcapitata*) 38 mg/L

Bird toxicity:

Acute oral LD₅₀ bobwhite quail > 2000 mg/kg

Bacteria toxicity: EC₅₀ activated sludge > 10000 mg/L

Triflumuron:

Fish toxicity: LC₅₀ (96 h) bluegill sunfish (*Lepomis macrochirus*) > 20.8 µg/L

LC₅₀ (96 h) rainbow trout (*Onchorhynchus mykiss*) > 24.2 µg/L

Daphnia toxicity: EC₅₀ (48 h) water flea (*Daphnia magna*) 1.6 µg/L

Algal toxicity:

Growth rate: IC₅₀ (72 h) green algae (*Desmodesmus subspicatus*) > 0.025 mg/L

Bird toxicity:

Acute oral LD₅₀ bobwhite quail 561 mg/kg

Bacteria toxicity: EC₅₀ activated sludge > 10000 mg/L

Environmental fate, persistence and degradability, mobility

Triadimenol is inherently biodegradable ≤ 70% in 28 days.

Bioconcentration factor (BCF): 21

DT₅₀ in sandy loam is 110 to 375 days; in loam 240 to 270 days.

Triflumuron degrades fairly rapidly in soil.

Triflumuron bioconcentration factor (BCF): 612

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13. DISPOSAL CONSIDERATIONS

When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressure rinse them 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 this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product via a reputable disposal contractor to an approved landfill.

Rinse all application equipment with clean water immediately after use and dispose of rinsings in a dedicated disposal pit, specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

14. TRANSPORT INFORMATION

UN number	Not applicable
Proper shipping name	Not applicable
Class and Subsidiary Risk	Not applicable
Packing Group	Not applicable
EPG	Not applicable
Hazchem code	Not applicable
Marine Pollutant	No (Baytan T Flowable Seed Dressing contains 0.4% triflumuron. Triflumuron is classified as a Marine Pollutant "P" in Europe, but it is not on the IMDG list.)

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority approval number: 40406

See also Section 2.

16. OTHER INFORMATION

Trademark information Baytan® is a Registered Trademark of Bayer.

Preparation information Replaces August 2, 2004 MSDS.
Reasons for revision: Minor formulation change, hazard classification, risk phrase, physical properties.

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