



SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Bayfidan® 250 EC Fungicide
Other names	none
Product code (UVP)	04902750
Chemical Group	triazole
Recommended use	Fungicide
Chemical Formulation	Emulsifiable concentrate (EC)
Company	Bayer CropScience Pty Ltd –ABN 87 000 226 022 391-393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone	(03) 9248 6888
Technical Information Service	1800 804 479
Facsimile	(03) 9248 6800
Website	www.bayercropscience.com.au
Emergency telephone no.	1800 033 111 Orica SH&E Shared Services

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

HAZARDOUS SUBSTANCE

NON-DANGEROUS GOODS

Hazardous classification	Hazardous (National Occupational Health and Safety Commission - NOHSC)
R-phrases(s)	R36/38 - Irritating to eyes and skin.
S-phrases(s)	See sections 4, 5, 6, 7, 8, 10, 12, 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. - See Section 14.
SUSMP classification (Poison Schedule)	Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
 Triadimenol 250 g/l

Chemical Name	CAS-No.	Concentration [%]
Triadimenol	55219-65-3	23.00
N-Methyl-2-pyrrolidone	872-50-4	>= 50.00 - <= 60.00
Alkylaryl/polyglycol ether	104376-75-2	>= 15.00 - <= 25.00
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.

Inhalation

Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Call a physician or poison control center immediately.

Eye contact

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. Call a physician or poison control center immediately.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting or give anything by mouth to an unconscious person.

Notes to physician

Symptoms

Symptoms and hazards refer to the solvent., Headache, Blurred vision, Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea., Aspiration may cause pulmonary oedema and pneumonitis.

Treatment

Treat symptomatically.
Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.
Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which shall not be used for safety reasons

High volume water jet

Hazards from combustion products

In the event of fire the following may be released:
Hydrogen chloride (HCl)
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide (CO)
Nitrogen oxides (NOx)

Precautions for fire-fighting

In the event of fire and/or explosion do not breathe fumes.
In the event of fire, wear self-contained breathing apparatus.
Avoid contact with spilled product or contaminated surfaces.
Contain the spread of the fire-fighting media.
Do not allow run-off from fire fighting to enter drains or water courses.
Whenever possible, contain fire-fighting water by diking area with sand or earth.
Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.



Hazchem Code not applicable

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with spilled product or contaminated surfaces.
Use personal protective equipment.

Environmental precautions

Contain contaminated water and fire fighting water.
Do not allow to get into surface water, drains and ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up

Clean contaminated floors and objects thoroughly, observing environmental regulations.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.
Collect and transfer the product into a properly labelled and tightly closed container.
Decontaminate tools and equipment following cleanup.

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

Handling

Hygiene measures

After each day's use, wash gloves, face shield or goggles and contaminated clothing.
Avoid contact with skin, eyes and clothing.
Keep working clothes separately.
Remove soiled clothing immediately and clean thoroughly before using again.
Garments that cannot be cleaned must be destroyed (burnt).
Wash hands before breaks and immediately after handling the product.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.
Vapours are heavier than air and may spread along floors.

Storage

Requirements for storage areas and containers

Keep out of the reach of children.
Store in a place accessible by authorized persons only.
Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep away from direct sunlight.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Flammability

C1 Combustible Liquids Flash Point > 60 °C - <= 150 °C

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
------------	---------	--------------------	--------	-------



N-Methyl-2-pyrrolidone	872-50-4	19 ppm (TWA)		OES BCS
N-Methyl-2-pyrrolidone	872-50-4	103 mg/m ³ / 25 ppm (TWA)	08 2005	AU OEL
N-Methyl-2-pyrrolidone	872-50-4	309 mg/m ³ / 75 ppm (STEL)	08 2005	AU OEL

N-Methyl-2-pyrrolidone 872-50-4 Skin designation: Can be absorbed through the skin.

For further details on the Occupational Exposure Standards, see Section 16.

Biological limit values
 none

Personal protective equipment - End user

- Respiratory protection AS/NZS 1715/1716 approved respirator
 Use respiratory protection for organic vapours.
- Hand protection Elbow-length PVC or nitrile gloves
- Eye protection Goggles
- Skin and body protection Cotton overall buttoned to the neck and wrist
 Washable hat

Engineering Controls

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form Liquid, clear
- Colour light brown
- Odour aromatic

Safety data

- pH 6.0 - 8.0 at 1 % (23 °C)
- Flash point 93 °C
- Ignition temperature no data available
- Upper explosion limit 9.5 %(V)
 The data refer to the solvent.
- Lower explosion limit 1.3 %(V)
 The data refer to the solvent.
- Vapour pressure 0.32 mbar at 20 °C
 The data refer to the solvent.



Relative vapour density	3.4 The data refer to the solvent.
Density	ca. 1.09 g/cm ³ at 20 °C
Water solubility	emulsifiable
Partition coefficient: n-octanol/water	no data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Materials to avoid	Acids Bases Oxidizing agents Reducing agents
Hazardous Decomposition Products	Hydrogen chloride (HCl) Hydrogen cyanide (hydrocyanic acid) Carbon monoxide Nitrogen oxides (NO _x)
Thermal decomposition	Stable under normal conditions.
Hazardous reactions	No dangerous reaction known under conditions of normal use. Strong exothermic reaction with acids. Violent exothermic reaction with bases.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Harmful if inhaled. May cause upper respiratory tract irritation.
Skin	Irritating to skin. The product may be absorbed through the skin. Prolonged skin contact may cause skin irritation and/or dermatitis.
Eye	Causes eye irritation. Liquid or vapor may cause irritation, burns, corneal opacity.
Ingestion	Harmful if swallowed.
Acute oral toxicity	LD ₅₀ (rat) > 2,000 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC ₅₀ (rat) > 0.412 mg/l Determined in the form of a respirable aerosol. Highest attainable concentration. Test conducted with a similar formulation.



Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg Test conducted with a similar formulation.
Skin irritation	No skin irritation (rabbit) Test conducted with a similar formulation.
Eye irritation	Slight irritant effect - does not require labelling. (rabbit) Test conducted with a similar formulation.
Chronic toxicity	Triadimenol did not cause specific target organ toxicity in experimental animal studies. N-methyl-2-pyrrolidone caused specific target organ toxicity in experimental animal studies in the following organ(s): testes.

Assessment Mutagenicity

Triadimenol was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
N-methyl-2-pyrrolidone was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Triadimenol caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The increased tumour incidence is not considered to be treatment related.
N-methyl-2-pyrrolidone was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment Toxicity to Reproduction

Triadimenol caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. Triadimenol caused reduced fertility.
N-methyl-2-pyrrolidone caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. N-methyl-2-pyrrolidone caused a reduced pup survival, a reduced litter size and a reduced pup weight.

Assessment developmental toxicity

Triadimenol caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Triadimenol are related to maternal toxicity.
N-methyl-2-pyrrolidone caused developmental toxicity only at dose levels toxic to the dams.
N-methyl-2-pyrrolidone caused a reduced pup survival.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 42 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Water flea (<i>Daphnia magna</i>)) 253 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC50 (<i>Pseudokirchneriella subcapitata</i>) 41.13 mg/l Growth rate Exposure time: 72 h



Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) > 2,000 mg/kg The value mentioned relates to the active ingredient triadimenol.
Additional ecological information	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Additional ecological information	No other effects to be mentioned.
Biodegradability	<=70 % Exposure time: 28 d The value mentioned relates to the active ingredient triadimenol.
Biodegradability	Readily biodegradable. The value mentioned relates to N-methyl-2-pyrrolidone.
Stability in soil	In sandy loam : DT50 110 - 375 d. Depending on microbial activity. The value mentioned relates to the active ingredient triadimenol. In loam : DT50 240 - 270 d. Depending on microbial activity. The value mentioned relates to the active ingredient triadimenol.
Bioaccumulation	no data available
Additional Environmental Information	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Small containers (1 L/1 kg or less):

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.

5, 10, 20 litre packs

Metal drums and plastic containers:

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 this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations not classified as dangerous goods.

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 30515

See also Section 2.



SECTION 16. OTHER INFORMATION

Trademark information Bayfidan® is a registered trademark of the Bayer Group.

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.

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.

Further details on the Occupational Exposure Standards mentioned in Section 8:

CEILING: Ceiling Limit Value

OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

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.

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.

SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.

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.

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

END OF SDS