

SAFETY DATA SHEET

TERRAZOLE® 350 WP SOIL FUNGICIDE



Version 1.8 Revision Date: 05.05.2016 MSDS Number: 400000003983 Country: AU
Language: EN

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TERRAZOLE® 350 WP SOIL FUNGICIDE

Product code : 400000003983

Details of the supplier of the safety data sheet

Company: Arysta LifeScience Australia Pty Ltd
c/o Level 3, 70 Hindmarsh Square
Adelaide SA
Australia
5000
Telephone : + 61 8 8112 0900

Prepared by sds.request@arysta.com

Further information for the safety data sheet :
sds.request@arysta.com

1.4 Emergency telephone number

Emergency telephone number: +61 2801 44558, ORICA : 1800 033 111 (24 hr Service)
For advice, contact a Poisons Information Centre (Phone: Australia 131 126 or New Zealand 0800 764 766) or a doctor at once.
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Recommended use of the chemical and restrictions on use

Recommended use : Fungicide

Restrictions on use : Agriculture
For professional users only.
APVMA No: 53332

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Carcinogenicity : Category 1A


GHS Label element

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Hazard pictograms : 

Signal word : Danger

Hazard statements : H350 May cause cancer.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Hazardous substance

Dangerous goods

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Occupational health effects due to inhalation of mineral dusts incorporating crystalline silica (quartz, cristobalite, tridymite), crystalline silicates (kaolin, talc) graphite or coal.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Etridiazole - 350 g/kg

Hazardous components

Chemical Name	CAS-No.	Concentration (% w/w)
5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole	2593-15-9	>= 30 - < 60
silica gel	112926-00-8	>= 10 - < 30
quartz (SiO ₂)	14808-60-7	< 10
sodium 2-[methyloleoylamino]ethane-1-sulphonate	137-20-2	< 10

SECTION 4. FIRST AID MEASURES

General advice :
For advice, contact a Poisons Information Centre (Phone: Australia 131 126 or New Zealand 0800 764 766) or a doctor

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- at once.
- If inhaled : Remove to fresh air.
Obtain medical attention.
- In case of skin contact : Remove contaminated clothing and shoes.
Wash off with warm water and soap.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
If symptoms persist, call a physician.
- If swallowed : Do NOT induce vomiting.
Rinse mouth with water.
Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : Symptoms may be delayed.
Suspected of causing cancer.
- Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.
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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Extinguishing media - large fires
Alcohol-resistant foam
(on small fires)
Carbon dioxide (CO₂)
Dry chemical
Water spray
- Unsuitable extinguishing media : Water spray jet
- Specific hazards during fire-fighting : Burning produces noxious and toxic fumes.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Wear suitable protective clothing, gloves and eye/face protection.
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Environmental precautions : Prevent leaks and prevent soil / water pollution caused by leaks.

Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.
Avoid dust formation.
In accordance with local and national regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Wear suitable protective equipment.
Keep container tightly closed.
Avoid formation of dust and aerosols.

Conditions for safe storage : Keep in a dry, cool place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
silica gel	112926-00-8	TWA	10 mg/m3	AU OEL
		Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica		
		TWA	10 mg/m3	AU OEL
		Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica		
quartz (SiO ₂)	14808-60-7	TWA	0.1 mg/m3	AU OEL
		TWA (respirable dust)	0.1 mg/m3	AU OEL
		TWA (Respirable fraction)	0.025 mg/m3	ACGIH
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH

Personal protective equipment

Respiratory protection : Respirator with a dust filter

Hand protection

Remarks : Impervious butyl rubber gloves Replace when worn.

Eye protection : Safety glasses

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance : powder

Colour : grey

Odour : sweet, musty

Odour Threshold : No data available

pH : 7 - 9

Melting point/freezing point : 155 °C

Boiling point/boiling range : Not applicable

Flash point : > 110 °C

Evaporation rate : Not applicable

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : No data available

Density : 1.9 - 2.1 g/cm³

Bulk density : No data available

Solubility(ies)

 Water solubility : dispersible

 Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

 Viscosity, dynamic : Not applicable

 Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Self-Accelerating decomposition temperature (SADT) : Method: No information available.

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Oxidizing potential : The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : None known.

Conditions to avoid : Contamination

Incompatible materials : Oxidizing agents

Hazardous decomposition products : Burning produces noxious and toxic fumes.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): 3,266 mg/kg
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.8 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
GLP: yes

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Acute oral toxicity : LD50 (Rat): > 945 mg/kg
Method: OECD Test Guideline 401
Remarks: Harmful if swallowed.

Acute inhalation toxicity : LC50 (Rat): > 5.7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

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Method: OECD Test Guideline 402

silica gel:

Acute oral toxicity : LD50 (Rat): > 22,500 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit
Result: No skin irritation

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

silica gel:

Result: No skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: No eye irritation

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

silica gel:

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.

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Chronic toxicity

Germ cell mutagenicity

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Germ cell mutagenicity - Assessment : Based on available data, the classification criteria are not met.

quartz (SiO₂):

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Application Route: Oral
Exposure time: 104
NOAEL: 5 mg/kg/day

LOAEL: 30 mg/kg

Method: OECD 453

Carcinogenicity - Assessment : Suspected of causing cancer.

silica gel:

Carcinogenicity - Assessment : IARC Class 3, not classifiable as to carcinogenicity to humans

quartz (SiO₂):

Carcinogenicity - Assessment : Human carcinogen.

Reproductive toxicity

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Effects on fertility : Species: Rat
Application Route: Oral
General Toxicity - Parent: 5.3
General Toxicity F1: 5.3
Method: OECD Test Guideline 416

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Effects on foetal development : Species: Rabbit
Application Route: Oral
General Toxicity Maternal: 15
Teratogenicity: 15
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

STOT - single exposure

Product:

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

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

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

STOT - repeated exposure

Product:

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

Components:

quartz (SiO₂):

Exposure routes: Inhalation

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Species: Rat

NOAEL: 2.7 mg/kg

Application Route: Oral

Exposure time: 91 d

Method: OECD Test Guideline 408

Target Organs: Liver

Species: Rat

NOAEL: 20 mg/kg

Application Route: Dermal

Exposure time: 28 d

Method: OECD Test Guideline 410

Species: Rat

NOAEL: 0.015 mg/l

LOAEL: 0.015 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 28 d

Method: OECD Test Guideline 412

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Further information

Product:

Remarks: No information available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : ErC50 (Chlorella pyrenoidosa (aglae)): 0.8 mg/l
Exposure time: 120 h
Remarks: No data available

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0.8 mg/l
Exposure time: 48 h
Test Type: static test

silica gel:

Toxicity to fish : LC50 (Fish): > 10,000 mg/l
Exposure time: 96 h
Test Type: static test

Persistence and degradability

Product:

Biodegradability : Remarks: Not readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Bioconcentration factor (BCF): 165

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Partition coefficient: n-octanol/water : Pow: 289

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Mobility in soil

Components:

5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (etridiazole)
Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID No. : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., Environmentally hazardous substance, solid, n.o.s. (etridiazole)
Class : 9
Packing group : III
Labels : Miscellaneous

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Packing instruction (cargo aircraft) : 956

Packing instruction (passenger aircraft) : 956

IMDG-Code

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (etridiazole)

Class : 9

Packing group : III

Labels : 9

EmS Code : F-A, S-F

Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

ADG

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (etridiazole)

Class : 9

Packing group : III

Labels : 9

Hazchem Code :

Remarks : SP No. AU01 Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;
(a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or
(b) IBCs.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform Scheduling of Medicines and Poisons : Schedule 5

Prohibition/Licensing Requirements : quartz (SiO₂)
Refer to model WHS Act and Regulations for prohibition, authorisation and restricted use.

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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TDG - Transportation of Dangerous Goods; UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Date format : dd.mm.yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Carechem24 International Worldwide Coverage

Emergency Phone Number

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<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China	+86 532 8388 9090
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285 +82 (0)234 798 401
	Vietnam	+65 3158 1255
	India	+65 3158 1198 0800 100 7479
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Emergency Phone Number	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	South Africa	+27 21 300 2732
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States of America and Canada	+1866 928 0789 +1 215 207 0061
<u>Latin America:</u>	Brazil	+55 11 3197 5891
	Mexico	+52 555 004 8763
	Chile	+56 225 829 336
	All other countries	+44 (0) 1235 239 670