

Safety Data Sheet

TETRIS EC

Reg. No: L 8774 (Act No 36 of 1947)

1) PRODUCT AND COMPANY IDENTIFICATION	
Product name:	TETRIS EC
Other means of identification:	Tetraconazole g/L EC
Chemical Name:	10% - 12.5% (+/-) 2-(2,4-dichlorophenyl)-3-(1 H 1,2,4triazol-1-yl)propyl-1,1,2,2-tetrafluoroethylether Tetraconazole
Recommended use:	Fungicide
Restrictions on use:	Agriculture
UN No:	3082
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 TYGERBERG:021 931 6129 RED CROSS 021 689 5227 GRIFFON POISON CENTRE: 082 446 8946.
2) HAZARDS IDENTIFICATION	
Classification of the substance/mixture:	Acute Toxicity (Oral) Category 4 Acute Toxicity (Dermal) Category 4 Acute Toxicity (Inhalation) Category 3 Aspiration Toxicity Category 1 Aquatic Chronic Category 2
Label Elements: Globally Harmonized System, EU (GHS):	Pictograms:  Signal word: Danger Hazard Statements: H302: Harmful if swallowed. H304: May be fatal if swallowed and enters airways. H332: Harmful if inhaled. H411: Toxic to aquatic life with long-lasting effects. Precautionary Statements: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe dust/mist/spray. P262: Do not get in eyes, on skin, or on clothing. P270: Do not eat, drink or smoke when using the product. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves, protective clothing, eye protection. P321: Specific treatment (See First aid measures on this label) P362+P364: Take off contaminated clothing and wash it before reuse.

According to Directive 67/548/EEC No. 1272/2008 [CLP]

P405: Store locked up.

Hazard Symbol(s):

Xn – dangerous to health

Xi - Irritant

N – dangerous for the environment

R Phrases:

R22: Harmful if swallowed.

R36/38: Irritating to eyes and skin.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65: Harmful: may cause lung damage if swallowed.

R66: Repeated exposure may cause skin dryness or cracking.

R67: Vapours may cause drowsiness and dizziness.

S Phrases:

S2: Keep out of reach of children.

S13: Keep away from food, drink and animal feedstuffs.

S20/21: When using do not eat, drink or smoke.

S24/25: Avoid contact with skin and eyes.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37: Wear suitable protective clothing and gloves.

S46: If swallowed, seek medical advice immediately and show this container or label.

S57: Use appropriate container to avoid environmental contamination.

S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

3) COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Not applicable

3.2 Mixtures:

Chemical name	Concentration	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)
Tetraconazole	100 g/L	112281-77-3	407-760-6	Acute Tox 4 (H302) Acute Tox 4 (H332) Aquatic Chronic 2 (H411)
Benzyl alcohol	<20%	100-51-6	202-859-9	Acute Tox 4 (H302) Acute Tox 4 (H332)
Solvent naphtha (petroleum), heavy arom.	<60%	64742-94-5	265-198-5	Asp Tox 1 (H304)

4) FIRST AID MEASURES

Description of First-Aid Measures:

Inhalation:

Ventilate the premises. The patient is to be removed immediately from the contaminated premises and made to rest in a well ventilated area. Should the patient feel unwell, OBTAIN MEDICAL ATTENTION.

Skin contact:

Immediately take off all contaminated clothing. Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Eye contact:

Wash immediately and thoroughly with running water, keeping eyelids raised, for at least 10 minutes. Following this, protect the eyes with sterile gauze or a clean, dry, handkerchief. OBTAIN A MEDICAL EXAMINATION.

Ingestion:

Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre Seek medical assistance immediately.

Most important symptoms and effects, both acute and delayed:	None known.								
Indication of any immediate medical attention and special treatment needed:	A suspension of activated charcoal in water, or liquid paraffin may be administered.								
5) FIRE-FIGHTING MEASURES									
Extinguishing Media:	Water, CO2, Foam, Chemical powders, according to the materials involved in the fire.								
Unsuitable Extinguishing Media:	Do not use high volume water jet, due to contamination risk.								
Specific Hazards arising from the substance/mixture:	Avoid inhaling the fumes which, at high temperatures, may contain toxic substances such as COx, NOx, HCl, HF and HCN.								
Fire Fighting:	Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid pollution of waterways.								
Protective clothing:	Use protection for the respiratory tract. Self-contained breathing apparatus.								
6) ACCIDENTAL RELEASE MEASURES									
Personal precautions, protective equipment and emergency procedures:	Use a mask, gloves and protective clothing. For personal protection see Section 8.								
Environmental precautions:	Do not contaminate waterways, drains and groundwater. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.								
Methods and material for containment and cleaning up:	Wear protective clothing. Clear area of unprotected personnel. Environmental measures: Limit leakages with earth or sand.If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities. Cleaning methods: Rapidly recover the product. To do so, wear a mask and protective clothing.If the product is in a liquid form, stop it from entering the drainage system.Recover the product for re-use if possible, or for elimination.								
7) HANDLING & STORAGE									
Precautions for Safe Handling:	Avoid contact and inhalation of the vapours. See, too, paragraph 8 below. Do not eat or drink while working. Do not smoke while working.								
Conditions for Safe Storage, including any incompatibilities:	Adequately ventilated premises. Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds.								
8) EXPOSURE CONTROL / PERSONAL PROTECTION									
Appropriate Engineering Controls:	It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.								
Control Parameters: Occupational exposure limits:	<table><tr><td>Ingredient</td><td>CAS#</td><td>Limit</td><td>Basis</td></tr><tr><td>Solvent naphtha (petroleum), heavy aroma.</td><td>64742-94-5</td><td>8 ppm 50 mg/m³</td><td>TWA</td></tr></table>	Ingredient	CAS#	Limit	Basis	Solvent naphtha (petroleum), heavy aroma.	64742-94-5	8 ppm 50 mg/m ³	TWA
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PERSONAL PROTECTIVE EQUIPMENT:	
Clothing:	Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance. e.g. cotton, rubber, PVC or viton.
Gloves:	Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance, e.g. P.V.C., neoprene or rubber.
Eye protection:	The use of safety goggles is recommended. Use close fitting safety goggles and/or visor.
Emergency eye wash:	Do not use eyewash or ointment of any kind (before obtaining an examination or advice from an eye specialist).
9) PHYSICAL & CHEMICAL PROPERTIES	
Form:	Liquid
Colour:	Light yellow
Odour:	Aromatic
Solubility:	Emulsifies in water
pH:	4.9
Odour threshold:	Not available
Melting point / Freezing point	<10°C
Initial boiling point and boiling range	Not available
Flash point:	64°C
Evaporation rate:	Not available
Flammability (solid, gas)	Not available
Upper/ lower flammability or explosive limits:	Not available
Vapour pressure:	0.18 mPa at 20°C (ref. to tetraconazole)
Vapour density:	Not available
Relative density:	0.97
Partition coefficient: n-octanol/water	Log P = 3.56 (ref. to tetraconazole)
Auto-ignition temperature:	Not available
Decomposition Temperature:	Not available
Viscosity:	Not available
10) STABILITY & REACTIVITY	
Reactivity:	No hazardous reactions if stored and handled as indicated.
Chemical Stability:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
Possibility of hazardous reactions:	None under normal conditions.
Conditions to avoid:	None.
Incompatible materials:	None known.
Hazardous decomposition product(s):	Avoid inhaling the fumes which, at high temperatures, may contain toxic substances such as COx, NOx, HCl, HF and HCN.
11) TOXICOLOGICAL INFORMATION	
Acute Toxicity:	
Oral:	LD50 1250mg/kg male 1030 female rats.
Dermal:	LD50 > 2000 mg/kg, rat.
Inhalation:	LC50 (4h) > 3.66 mg/l air (rat)
Skin Corrosion/Irritation:	Causes significant inflammation with erythema, scabs, and oedema. Repeated exposure to the product may cause skin dryness or cracking.
Serious Eye Damage/Irritation:	Causes irritation that may last for over 24 hours.
Respiratory or Skin Sensitization:	Not sensitizing agent (Guinea Pig).
Germ Cell Mutagenicity:	No mutagenic effects.
Carcinogenicity:	No carcinogenic effects.
Reproductive Toxicity:	No evidence of reproduction toxicity.
STOT-SE:	No data available.
STOT-RE:	No data available.
Aspiration Hazard:	May be fatal if swallowed and enters airways.
12) ECOLOGICAL INFORMATION	

Ecotoxicity: Birds: Fish: Daphnia: Algae: Worms: Bees:	Acute oral LD ₅₀ for bobwhite quail 132, mallard ducks >63 mg/kg. Dietary LC ₅₀ (5 d) for bobwhite quail 650, mallard ducks 422 mg/kg diet. LC ₅₀ (96 h) for rainbow trout 5.1, bluegill sunfish 4.3 mg/l. LC ₅₀ (48 h) 3.0 mg/l. ErC ₅₀ (72 h) for <i>Scenedesmus subspicatus</i> 0.41 mg/l. LC ₅₀ (14 d) for <i>Eisenia fetida</i> 71 mg/kg soil. LD ₅₀ (oral) >130 µg/bee.
Persistence and Degradability:	No accumulation in the field.
Bio-accumulative Potential:	Readily absorbed, metabolized and excreted with no significant retention in tissues.
Mobility in Soil:	No leaching occurs in standard soils. Koc 531–1922 (4 soil types).
13) DISPOSAL CONSIDERATIONS	
Waste Disposal:	Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.
Container Disposal:	If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Do not transport if this container is damaged or leaking.
14) TRANSPORTATION INFORMATION	
Road Transport ADR / IRD:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tetraconazole) Transport Hazard Class: 9 Packaging group: III Labelling no: 9 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Maritime Transport IMDG / IMO:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tetraconazole) Transport Hazard Class: 9 Packaging group: III Labelling no: 9 Environmental Hazards: Marine Pollutant Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Air Transport ICAO / IATA:	UN NUMBER: 3082 UN Proper Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tetraconazole) Transport Hazard Class: 9 Packaging group: III Labelling no: 9 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.
Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code):	No transport in bulk according to the IBC Code.
15) REGULATORY INFORMATION	
Safety, health and environmental regulations/legislation specific for the substance/mixture:	For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)
Chemical Safety Assessment:	Advice on product handling can be found in sections 7 and 8 of this safety data sheet.
16) OTHER INFORMATION	

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

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Abbreviations and acronyms:

1. CAS number: Chemical Abstracts Service number.
2. CLP: Classification, Labelling, Packaging.
3. LD₅₀: Lethal Dose for 50% of the test population.
4. LC₅₀: Lethal Concentration for 50% of the test population.
5. DT₅₀: Half-life.
6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals).
7. STOT: Specific Target Organ Toxicity
8. SE: Single exposure
9. RE: Repeated exposure
10. TWA: Time-weighted average.

Literature References:

- GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html
- ECHA: <https://echa.europa.eu/search-chemicals>