

# SAFETY DATA SHEET

Issue No: 1.0

First print date: 2 October 2023

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **TEBUCURE PRIME 250 EC**

Other means of identification: Prothioconazole 125 g/ℓ + Tebuconazole 125 g/ℓ

Recommended Use: Agricultural Fungicide

Supplier: ICA International Chemicals (Pty) Ltd

Address: 28 Planken Street  
Plankenbrug Industrial  
STELLENBOSCH · 7600 · SOUTH AFRICA

Telephone No: +27-21 886 9812

Fax No: +27-21 886 8209

Emergency Tel No: Griffon Poison Information Centre: +27-82 446 8946  
Human Poison Helpline: +27-861 555 777

## 2. HAZARD IDENTIFICATION

GHS Classification of product

Skin Irritation – Category 2  
Eye Irritation – Category 2  
STOT SE – Category 3  
Reproductive Toxicity – Category 2  
Acute Aquatic Toxicity – Category 1  
Chronic Aquatic Toxicity – Category 1

Label Elements  
Classification and Labelling of Chemicals (GHS) Rev 9, 2021; Regulation EC No. 1272/2008 [EU-GHS/CLP]



Signal word

**WARNING**

Hazard Statements

H315 – Causes skin irritation  
H319 – Causes serious eye irritation  
H335 – May cause respiratory irritation  
H361 – Suspected of damaging fertility or the unborn child  
H400 – Very toxic to aquatic life  
H410 – Very toxic to aquatic life with long lasting effects

General Precautionary Statements

P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children.

Prevention Precautionary Statements

P103: Read carefully and follow all instructions.  
P203: Obtain, read, and follow all safety instructions before use.  
P261: Avoid breathing mist/vapours/spray.  
P264 + P265: Wash hands and exposed skin thoroughly after handling. Do not touch eyes.  
P271: Use only outdoors or in well-ventilated area.  
P273: Avoid release to the environment.

Response Precautionary Statements

P280: Wear protective gloves, protective clothing, eye and face protection.  
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
P332 + P317: If skin irritation occurs: Get medical help.  
P304 + P340 + P319: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help if you feel unwell.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P317: If eye irritation persists: Get medical help.  
 P318: IF exposed or concerned, get medical advice.  
 P321: For specific treatment; see first aid measures in section 4.  
 P362 + P364: Take off contaminated clothing and wash it before reuse.  
 P391: Collect spillage.  
 P403 + P233: Store in a well-ventilated place. Keep container tightly closed.  
 P405: Store locked up.  
 P501: Dispose of contents and container in accordance with national regulations.

Storage Precautionary Statements

Disposal Precautionary Statements

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS NO:	CONCENTRATION % (w/v)	CLASSIFICATION EC 1272/2008
Prothioconazole	178928-70-6	12.5	Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410
Tebuconazole	107534-96-3	12.5	Acute Oral Toxicity Category 4, H302; Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410; Reproductive Toxicity Category 2, H361
N,N-dimethyldecan-1-amide	14433-76-2	30 – 60	Skin Irritation Category 2, H315; Eye Irritation Category 2, H319; STOT SE Category 3, H335; Aquatic Chronic Category 2, H412

There are no additional ingredients present which, within the current knowledge of the provider of this SDS, and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. See section 16 for legend of additional H-phrases not in section 2.

### 4. FIRST AID MEASURES

**Show this SAFETY DATA SHEET to a doctor.**

**INHALATION:**

- Remove the victim from immediate source of exposure. Move victim to fresh air, if it can be done safely, and keep comfortable.
- If victim's breathing has stopped, perform artificial respiration.
- Administer oxygen if victim's breathing is difficult or irregular. Get medical help if you feel unwell.

**SKIN:**

- Remove and isolate contaminated clothing, shoes, and leather goods immediately and take a shower.
- Rinse affected areas (skin) cautiously with non-abrasive soap or mild detergent and large amounts of running water. Wash contaminated clothing before reuse.
- Get medical help if irritation develops and persists.

**EYES:**

- Rinse eyes cautiously with clean running water for at least 15 minutes, while holding eyelids apart. Remove contact lenses after 5 minutes if present and easy to do.
- Continue rinsing while holding eyelids apart. Seek medical help if irritation continues.

**INGESTION:**

- If swallowed, DO NOT induce vomiting, unless instructed to do so by poison control center or doctor.
- Have person sip a glass of water if able to swallow.
- Never give anything by mouth to an unconscious person.
- If vomiting does occur, keep on giving fluids. Get medical help.

**NOTE TO PHYSICIAN:**

- There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient.

**POTENTIAL HEALTH EFFECTS, ACUTE AND DELAYED:**

- Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

### 5. FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:**

**Small fires:** Dry chemical powder, carbon dioxide (CO<sub>2</sub>), water spray or alcohol-resistant foam

**Large fires:** Water spray, fog, or alcohol-resistant foam

**FIRE INVOLVING TANKS:**

Cool containers with flooding quantities of water until well after fire is out. DO NOT get water inside containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire.

<b>UNSUITABLE EXTINGUISHING MEDIA:</b>	DO NOT use high volume water jet, due to contamination risk.
<b>SPECIFIC EXTINGUISHING METHODS:</b>	Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Collect contaminated extinguishing water separately; do not allow contaminated water to reach the sewage or effluent systems.
<b>SPECIFIC HAZARDS ARISING FROM COMBUSTION PRODUCTS:</b>	In case of fire, the formation of Carbon monoxide (CO), Nitrogen oxides (NO <sub>x</sub> ), Sulphur oxides and Carbon dioxide (CO <sub>2</sub> ) can be expected.
<b>PRECAUTIONS FOR FIRE FIGHTERS:</b>	Fire fighters should wear full protective gear including self-contained breathing apparatus (SCBA). Fight fire from safe distance. Contact with the fumes and vapours should be avoided by staying upwind. Clean all clothing before reuse. Severely contaminated clothing cannot be adequately decontaminated and must be disposed as a hazardous waste. Shower with soap and water after contact with chemical product.
<b>FURTHER INFORMATION:</b>	<ul style="list-style-type: none"> <li>• If possible, safely move undamaged intact containers away from the area around the fire.</li> <li>• Keep containers cool by spraying with water if exposed to fire.</li> <li>• Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.</li> <li>• In case of fire and/or explosion do not breathe fumes.</li> </ul>

## 6. ACCIDENTAL RELEASE MEASURES

<b>SPILL OR LEAK:</b>	
<b>PERSONAL PRECAUTIONS:</b>	Avoid contact with skin and eyes. Do not touch or walk through spilled material. Do not inhale spray or fumes.
<b>PROTECTIVE EQUIPMENT:</b>	Wear personal protective clothing and equipment (see section 8).
<b>EMERGENCY PROCEDURES:</b>	Keep people and animals away. Eliminate all ignition sources (no smoking, flares, sparks, or flames) from immediate area. All equipment used when handling the product must be grounded.  Use water spray to reduce vapours or divert vapour cloud drift.
<b>ENVIRONMENTAL PRECAUTIONS:</b>	PREVENT spilled material from entering waterway and sewer systems, basements, and confined areas. If the product contaminates rivers and lakes or waterways immediately inform respective authorities.
<b>METHODS AND MATERIALS FOR CONTAINMENT:</b>	Contain and absorb liquid spills with inert material, remove by scoop or vacuum. Use approved industrial vacuum cleaner for removal and place in clearly marked waste containers.
<b>METHODS AND MATERIALS FOR CLEANING UP:</b>	Contain spillage, and then collect with non-combustible absorbent material, (e.g., sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean, non-sparking tools to collect absorbed material.
<b>SECONDARY DISASTER PREVENTION MEASURES:</b>	NA

## 7. HANDLING AND STORAGE

<b>PRECAUTIONS FOR SAFE HANDLING:</b>	<ul style="list-style-type: none"> <li>• Always store fungicides in their original containers, which include the label listing ingredients, directions for use, and first aid steps in case of accidental poisoning.</li> <li>• Never transfer fungicides to soft drink bottles or other containers. Children or others may mistake them for something to eat or drink.</li> <li>• Wear suitable protective clothing which include chemical-resistant overalls, footwear, socks, dust mask, eye shields and gloves.</li> <li>• Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Wash hands, arms, and face after application. Wash gloves and contaminated protective clothing daily before reuse.</li> </ul>
<ul style="list-style-type: none"> <li>- Suitable Technical Measures</li> <li>- Suitable Precautions</li> <li>- Prevention of contact</li> </ul>	
<b>CONDITIONS FOR SAFE STORAGE:</b>	
<ul style="list-style-type: none"> <li>- Suitable Technical Measures</li> <li>- Separation measures from incompatible substances and mixtures</li> </ul>	<ul style="list-style-type: none"> <li>• Keep out of reach of unauthorized persons, children, and animals. Always store fungicides in their original containers, closed with original cap and the original label, in a cool, dry, and well-ventilated area out of direct sunlight.</li> <li>• Segregate from foods and animal feeds.</li> <li>• DO NOT reuse the container for any other purpose.</li> </ul>

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>ADI – Acceptable Daily Intake</b>	<b>Prothioconazole</b> = 0.01 mg kg <sup>-1</sup> bw day <sup>-1</sup>
	<b>Tebuconazole</b> = 0.03 mg kg <sup>-1</sup> bw day <sup>-1</sup>

AOEL – Accepted Operator Exposure Level

Prothioconazole = 0.2 mg kg<sup>-1</sup> bw day<sup>-1</sup>

Tebuconazole = 0.03 mg kg<sup>-1</sup> bw day<sup>-1</sup>

NATIONAL EXPOSURE STANDARDS:

Not available

BIOLOGICAL LIMIT VALUES:

Not available

ENGINEERING CONTROLS:

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. If airborne mist/vapours are generated use local exhaust ventilation controls. Facilities should be equipped with an eyewash station and a safety shower. Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT:

**Respiratory Protection:** Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in confined spaces a respirator suitable for protection from spray and mists of pesticides is adequate.

**Hand Protection:** Wear chemical-resistant gloves made of any waterproof material such as nitrile rubber. Glove thickness: 0.5 mm

**Eye Protection:** The use of safety goggles (full-face shield) is recommended.

**Skin and Body Protection:** Wear suitable protective clothing which includes chemical-resistant overalls, footwear, socks, dust mask, eye shields and gloves. Remove and wash contaminated protective clothing daily.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
COLOUR:	Light yellow
ODOUR:	Slight / mild chemical odour
MELTING POINT / FREEZING POINT °C:	Prothioconazole = 140.3 °C Tebuconazole = 105 °C
BOILING POINT:	Prothioconazole = No boiling point under normal conditions. Tebuconazole = Decomposes before boiling
DECOMPOSITION TEMPERATURE (a.i):	Prothioconazole = 220 °C Tebuconazole = 350 °C
FLAMMABILITY:	Not available
EXPLOSIVE LIMITS:	Not available
FLASH POINT:	Not available
AUTO-IGNITION TEMPERATURE:	Not available
pH (1% IN WATER):	5.0 – 8.0
KINEMATIC VISCOSITY:	Not available
	$\text{Kinematic viscosity} = \frac{\text{Dynamic viscosity (mPa/s)}}{\text{Density (g/cm}^3\text{)}}$
VISCOSITY:	Not available
DENSITY / RELATIVE DENSITY:	0.98 g/ml
SOLUBILITY - WATER (a.i):	Prothioconazole = 22.5 mg/l Tebuconazole = 36.0 mg/l
N-OCTANOL / WATER PARTITION COEFFICIENT (a.i):	Prothioconazole: Log P <sub>ow</sub> = 2.0 Tebuconazole: Log P <sub>ow</sub> = 3.70
VAPOUR PRESSURE (a.i):	Prothioconazole = 7.4 X 10 <sup>-07</sup> mPa Tebuconazole = 1.30 X 10 <sup>-03</sup> mPa
RELATIVE VAPOUR DENSITY:	Not available

## 10. STABILITY AND REACTIVITY

REACTIVITY:	Stable under normal conditions no reaction with fire-fighting water.
CHEMICAL STABILITY:	Stable under normal use and storage conditions for at least 2 years.
HAZARDOUS REACTION:	Hazardous polymerization is not expected to occur.
CONDITIONS TO AVOID: (e.g. – heat, pressure, static discharge, shock, or vibration)	Avoid storage in moist or hot conditions, near to heat or ignition sources. Keep away from food, drink and open bodies of water.
INCOMPATIBLE MATERIALS:	None specified
HAZARDOUS DECOMPOSITION PRODUCTS:	When heated to decomposition, irritant or dangerous fumes/vapours may be emitted. See section 5.

## 11. TOXICOLOGICAL INFORMATION

	ANIMAL ACUTE TOXICITY DATA (ATE)	
ORAL:	LD <sub>50</sub> (rat) > 5000 mg a.i. /kg bw	Not Classified
DERMAL:	LD <sub>50</sub> (rat) > 5000 mg a.i. /kg bw	Not Classified
INHALATION:	LC <sub>50</sub> (4h) rat > 5 mg a.i./ℓ	Not Classified
SKIN IRRITATION / CORROSION:	≥ 10%	<b>Category 2</b>
SERIOUS EYE IRRITATION / DAMAGE:	≥ 10%	<b>Category 2</b>
RESPIRATORY OR SKIN SENSITIZATION:		Not Classified
GERM CELL MUTAGENICITY:		Not Classified
CARCINOGENICITY:		Not Classified
REPRODUCTIVE TOXICITY:	≥ 3%	<b>Category 2</b>
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:	≥ 20%	<b>Category 3</b>
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:		Not Classified
ASPIRATION HAZARD:		Not Classified

## 12. ECOLOGICAL INFORMATION

ECOTOXICITY:		
PROTHIOCONAZOLE	Birds: LD <sub>50</sub> (oral)	<i>Colinus virginianus</i> (Bobwhite Quail) Acute LD <sub>50</sub> > 2000 mg/kg bw/day <i>Anas platyrhynchos</i> (Mallard duck) LC <sub>50</sub> /LD <sub>50</sub> > 5000 mg/kg bw/day diet Chronic NOEL (21-day) = 78 mg/kg bw/day
	Fish: LC <sub>50</sub>	<i>Oncorhynchus mykiss</i> (Rainbow trout) Acute (96h) LC <sub>50</sub> = 1.83 mg a.i./ℓ NOEC = 0.308 mg a.i./ℓ (21-day)
	Aquatic invertebrates – <i>Daphnia</i>	<i>Daphnia magna</i> (Water flea) Acute (48h) EC <sub>50</sub> = 1.3 mg a.i./ℓ Chronic NOEC (21-day) = 0.56 mg a.i./ℓ
	Aquatic crustaceans	<i>Americamysis bahia</i> Acute (96h) LC <sub>50</sub> > 1.01 mg a.i./ℓ
	Algae - EC <sub>50</sub> / NOEC	<i>Pseudokirchneriella subcapitata</i> Acute (72h) EC <sub>50</sub> = 2.18 mg a.i./ℓ Chronic (96h) NOEC = 2.92 mg a.i./ℓ
	Bees	<i>Apis mellifera</i> Acute contact 48-hour LD <sub>50</sub> > 100 (μg.bee <sup>-1</sup> ) Acute oral 48-hour LD <sub>50</sub> > 71 (μg.bee <sup>-1</sup> )
	Earthworms: LC <sub>50</sub> /NOEC	<i>Eisenia fetida</i> Acute (14-day) LC <sub>50</sub> > 1000 mg a.i./kg d.w. soil Chronic NOEC = 5.3 mg a.i./kg (reproduction)
	TEBUCONAZOLE	Birds: LD <sub>50</sub> (oral)
Fish: LC <sub>50</sub>		<i>Oncorhynchus mykiss</i> (Rainbow trout) Acute (96h) LC <sub>50</sub> = 4.4 mg a.i./ℓ NOEC = 0.010 mg a.i./ℓ (21-day)
Aquatic invertebrates - <i>Daphnia</i>		<i>Daphnia magna</i> (Water flea) Acute (48h) EC <sub>50</sub> = 2.79 mg a.i./ℓ Chronic (21-day) NOEC = 0.01 mg a.i./ℓ
Aquatic crustaceans		<i>Americamysis bahia</i> Acute (96h) LC <sub>50</sub> = 0.46 mg a.i./ℓ
Algae - EC <sub>50</sub> / NOEC		<i>Scenedemus subspicatus</i>

Acute (72h) EC<sub>50</sub> = 1.96 mg a.i./ℓ  
 Chronic (96h) NOEC = 0.1 mg a.i./ℓ  
*Apis mellifera*  
 Acute contact 48-hour LD<sub>50</sub> > 200 (µg bee-1)  
 Acute oral 48-hour LD<sub>50</sub> > 83.05 (µg bee-1)  
*Eisenia fetida*  
 Acute (14-day) LC<sub>50</sub> = 1381 mg a.i./kg d.w. soil  
 Chronic NOEC (56-days) = 10 mg a.i./kg d.w. soil

Bees

Earthworms: LC<sub>50</sub> /NOEC

**AQUATIC TOXICITY:**

**Summation Method**

Aquatic Acute – **Category 1**

Aquatic Chronic – **Category 1**

**PERSISTENCE, DEGRADABILITY AND MOBILITY:**

**Prothioconazole** is non-persistent in the soil and slightly mobile.

DT<sub>50</sub> = 0.49 – 1.4 days

K<sub>oc</sub> = 1765 (slightly mobile)

**Tebuconazole** is moderately persistent in the soil and slightly mobile.

DT<sub>50</sub> = 25 – 91 days

K<sub>roc</sub> = 769 (slightly mobile)

**BIO-ACCUMULATIVE POTENTIAL:**

Prothioconazole: BCF = 43.9 ℓ/kg

Tebuconazole: BCF = 78 ℓ/kg

**SOIL MICRO-ORGANISMS:**

Carbon transformation

No significant adverse/long-term effect

Nitrogen transformation

No significant adverse/long-term effect

**13. DISPOSAL CONSIDERATIONS**

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities.

**TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Containers must be completely emptied before being disposed of. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler ([www.croplife.co.za](http://www.croplife.co.za)). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

**14. TRANSPORT INFORMATION**

**UN NUMBER:**

3082

**UN PROPER SHIPPING NAME:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID  
 (12.5 % prothioconazole + 12.5 % tebuconazole)

**TRANSPORT HAZARD CLASS(ES):**

Class 9

**PACKING GROUP:**

III (low danger)

**TRANSPORT PICTOGRAMS:**



**ENVIRONMENTAL HAZARD:**

Marine Pollutant: Yes

**TRANSPORT IN BULK:**

Not applicable, not to be transported in bulk.

**SPECIAL PRECAUTIONS FOR USER:**

Not applicable

**15. REGULATORY INFORMATION**

Conform to South African Regulation for Hazardous Chemical Agents, 2021.

Product: South African registration number L10808, Act 36 of 1947.

SDS valid for five years from date of issue.

**16. OTHER INFORMATION**

**Legend:** Full text of H-Statements referred to under sections 3:

H302 – Harmful if swallowed.

H412 – Harmful to aquatic life with long lasting effects.

**Key literature references and sources of data:** Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 9, 2021. UN Model Regulations Rev. 22 (2021). EU REGULATION (EC) No. 1272/2008.

This Safety Data Sheet (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 to prevent accidents in the normal workplace including in conjunction with other products.

The information was obtained from sources which we believe are reliable. However, the information is provided in good faith. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and for these reasons we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used for this product only.

First Edition Date: 18 September 2023

END of SDS