

Material Safety Data Sheet

Issue No: 1.6

Issue date: 24 May 2018

1. IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

Product Name: **TEBUCURE 250 EW**
Other names: Tebuconazole (triazole)
Recommended Use: Agricultural fungicide. End use formulated product.
Supplier: ICA International Chemicals (Pty) Ltd
Address: 28 Planken Street
 Plankenbrug Industrial
 STELLENBOSCH · 7600 · SOUTH AFRICA
Telephone No.: +27 (0) 21 886 9812
Fax No.: +27 (0) 21 886 8209
Emergency Phone No.: Griffon Poison Information Centre +27 82 446 8946
 Poisons Helpline 0861 555 777

2. HAZARD IDENTIFICATION

Hazard Classification: WHO Classification: III – Slightly Hazardous (Technical)
 Xn = Harmful; N = Dangerous for the environment.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT(s)	CAS NO.:	Hazardous Classification for ACTIVE INGREDIENT: (EU standards)	Content (% w/w)
Tebuconazole (RS)-1-(4-Chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl) pentan-3-ol	107534-96-3	Eu Cut Off level: >=5% Conc. <25%: Xn; R63	25%
N,N-dimethyloctanamide and N,N-dimethyldecanamide	14433-76-2 1118-92-9	Eu Cut Off level: Conc>= 25%: T; R61; R20/21; R36	>25%
Other Ingredients			Fill to 100%

Risk Phrases: R20/21: Harmful by inhalation and in contact with skin.
 R41 : Risk of serious damage to eyes
 R51-53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R63: Possible risk of harm to the unborn child [(Repr. Cat.3) considered being a precautionary chronic risk assessment].

Safety Phrases: S2: Keep out of reach of children
 S36/37: Wear suitable protective clothing and gloves
 S61: Avoid release to the environment. Refer to special instructions.

4. FIRST AID MEASURES

Show this MATERIAL SAFETY DATA SHEET to a doctor.

INHALATION: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. Call a physician if conditions continue. This product is expected to have low toxicity by inhalation but may affect people with respiratory conditions.

EYES: If in contact with eyes, rinse immediately with water for several minutes. Remove contact lenses, if present and easy to do. Hold eyelids apart and continue rinsing for several more minutes. Seek medical advice a.s.a.p. This product is a severe eye irritant.

SKIN: If in contact with skin, gently wash affected areas with plenty of water. Remove contaminated clothing and shoes immediately. Wash clothes before use.

INGESTION/SWALLOWED: Rinse out mouth with water and give water in small sips to drink, as much water as possible. Call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control centre. Never give anything by mouth to an unconscious person. Do not leave the person unattended.

MEDICAL ATTENTION: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote available.

5. FIRE FIGHTING MEASURES

- FLASH POINT:** · No Flash Point detected (Pensky-Martens closed cup). Boils at 100 °C.\
- SUITABLE EXTINGUISHING MEDIA:** · **SMALL FIRE:** Dry chemical, CO₂, water spray or regular foam.
 · **LARGE FIRE:**
- Water spray, fog or regular foam. Move closed containers away from fire area if you can do so without risk. Do not scatter spilled material with high pressure water streams. Dike fire - control water for later disposal.
 - Prevent entry into waterways, sewers, basements or confined areas.
- HAZARDS FROM STRONG COMBUSTION PRODUCTS:** · Can decompose at high temperatures forming toxic gases. Toxic gases include carbon dioxide, carbon monoxide, nitrogen and sulphur compounds.
- PRECAUTIONS FOR FIRE FIGHTERS:** Fire fighters should wear full protective gear including a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak or transfer product to clean container as soon as possible to prevent spreading/leaking.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

BASIC PRE-CAUTIONARY statements for handling AGRICULTURAL Chemicals:

- Keep out of reach of children and animals.
- Wash hands before eating, drinking, smoking or using the toilet.
- Use in well ventilated areas.
- If contact with product is likely to occur, wear protective clothing.
- Wear rubber gloves when handling product to avoid skin contact.
- Wear eye protection to prevent product from splashing into eyes.
- After work, remove and wash contaminated protective clothing before using it again.

CONDITIONS FOR SAFE STORAGE

- Store in original container in a well-ventilated and in cool, dry, secure area.
- Keep away from heat/sparks/open flames. NO Smoking
- DO NOT re-use the container for any other purposes.
- Keep containers closed when not in use.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

ENGINEERING CONTROLS: Facilities should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYES: Safety goggles or face shield.
 GLOVES: Wear chemical resistant PVC gloves.
 RESPIRATORY: If inhalation of spray mist is likely to occur wear a self-contained breathing apparatus. Use in well-ventilated area ONLY. In case of **insufficient ventilation**, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Yellowish
PHYSICAL STATE:	Transparent viscous liquid
FORMULATION:	Emulsion, oil in water
ODOUR:	Chemical Odour
SPECIFIC GRAVITY:	~1.02 G/ML AT 20°C
FLASH POINT:	No flash Point detected (ASTM D 93 - Pensky-Martens Closed Cup)
BOILING POINT:	100 °C
EMULSION STABILITY and RE-EMULSIFICATION:	Stable (CIPAC F MT 36.1.1). (Product meet all FAO standards) 0h : Initial emulsification; 0.5h : Complete; 24.5h: Re-emulsification complete
pH:	6.0 – 9.0 (CIPAC F MT 75 – 1% solution)
POURABILITY:	Rinsed Residue Max 0.5% (FAO Spec) [CIPAC F MT 148]
PERSISTANT FOAM:	12 ml foam after 1 minute [CIPAC F MT 47.1 – 5% solution] (FAO Spec = max 25ml after 1 min)
STORAGE STABILITY:	0°C for 7 days: No separation of oily matter after gentle agitation. (CIPAC MT F 39.1) 54°C for 14 days: Resistant to thermal decomposition. (CIPAC F MT 46)

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under normal use and storage conditions.
CONDITIONS TO AVOID:	Excessive heat or cold and storage for prolonged periods in direct sunlight.
INCOMPATIBLE MATERIALS:	None.
HAZARDOUS DECOMPOSITION PRODUCTS:	Can decompose at high temperatures forming toxic gases. Toxic gases include carbon dioxide, carbon monoxide, nitrogen and sulphur compounds.

11. TOXICOLOGICAL INFORMATION

ANIMAL ACUTE TOXICITY DATA (PRODUCT)

ORAL:	LD ₅₀ (rat)	> 2000 mg/kg bw
DERMAL:	LD ₅₀ (rabbit)	> 4000 mg/kg bw
INHALATION:	LC ₅₀ rat	> 0.30mg/L/4hr.
DERMAL IRRITATION:	(OECD 404)	Slight irritation to skin
EYE IRRITATION:	(OECD 405)	Moderate to severe eye irritation.
SENSITISATION:	Guinea pig	Not a sensitizer to skin

12. ECOLOGICAL INFORMATION

ECOTOXICITY:	Fish	<p>Active ingredient:</p> <ul style="list-style-type: none"> • LC₅₀ (µg/L) – 5,900 (Sheepshead minnow) [Moderately Toxic] • LC₅₀ (µg/L) – 5,700 (Bluegill) [Moderately Toxic] • LC₅₀ (µg/L) – 4,400 (Rainbow trout) [Moderately Toxic] • LC₅₀ (µg/L) – 490.0 (Opossum shrimp) [Highly Toxic] <p>Chronically toxic to freshwater fishes based on a reduction in eggs laid (rainbow trout NOAEC = 12 µg/L) Chronically toxic to freshwater invertebrates based on a reduction in growth among young daphnids (Waterflea NOAEC = 120 ug/L)</p>
	Birds	<p>Practically non-toxic to avian species on an acute and sub-acute basis.:</p> <ul style="list-style-type: none"> • Northern bobwhite LD₅₀ = > 5 000ppm (1988 mg/kg) • Mallard Duck LC₅₀ = > 4816 ppm <p>Chronically toxic to avian species based on low egg production.</p>
	Terrestrial and Semi-Aquatic Plants	<ul style="list-style-type: none"> • Highly toxic to green algae. • Highly toxic to duckweed.
	Bee:	Practically non-toxic to non-targeted insects (LC ₅₀ - 176 µg/bee) on an acute basis.

PERSISTENCE AND DEGRADABILITY:	<p>Tebuconazole is persistent in soil (aerobic metabolism T_{1/2} = 796 days) and moderately mobile to relatively immobile. Tebuconazole has little potential to reach ground water, except in soils of high sand and low organic matter content. The main route of tebuconazole dissipation is soil adsorption which increases with increasing soil organic matter content.</p>
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13. DISPOSAL CONSIDERATIONS

Do not use fungicide containers or packaging material for storing water or food. Triple or preferable pressure rinse empty containers with clean water before disposal. Add rinsing to spray/mixing tank. Do not dispose of undiluted chemical 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 500mm in a disposal pit specifically marked and set up for this purpose clear of any water source (river, dam, spring, or borehole). Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN NUMBER: 3082

PROPER SHIPPING NAME: Environmentally hazardous substance, liquid, n.o.s.
(Tebuconazole solution 25%)

CLASS AND SUBSIDIARY RISK(S): Class 9

PACKING GROUP: III (minor danger)

HAZCHEM CODE:



Environmentally Hazardous substance

15. REGULATORY INFORMATION

Poisons Schedule No.: Not applicable

16. OTHER INFORMATION

Reason for update: New test result and to conform to the SANS 10234 : 2007 standard of the 16 Header Format.

The information given is based on a complete set of scientific studies and publications by various agricultural departments, organizations and universities over a period of many years. The United States Environmental Protection Agency (EPA) has reviewed all of these studies and reach its final decision regarding the risk assessment for tebuconazole.

This Material Safety Data Sheet (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 to prevent accidents in the normal workplace including in conjunction with other products. Care for the environment is essential for our future.

This MSDS is valid for three years from date of issue

END of MSDS