

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Tebuconazole 25%EW

**Trade Name:** GALECUR

**CAS No.:** 107534-96-3

**Molecular Weight:** 307.8

**Chemical Formula:** C<sub>16</sub>H<sub>22</sub>ClN<sub>3</sub>O

**Supplier and Authorized Exporter:** Shenzhen Yancheng Chemicals Co., Limited

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## 2. HAZARD IDENTIFICATION

### 2.1 Likely routes of exposure

#### Skin

Product is not harmful. However, the product is a skin irritant and may be corrosive due to emulsifiers. Not expected to be a skin sensitizer.

#### Eye

The product is a severe irritant to the eyes. Lengthily exposure or delayed treatment may cause serious damage to the eyes.

#### Inhalation

Not a hazard under normal use conditions. Prolonged or repeated exposure may irritate the nose, throat and respiratory tract. Regarded harmful.

#### Swallowed

Data suggests the product is harmful if swallowed. Normal handling procedures is not expected to cause injury. If large amounts are swallowed and aspiration occurs, chemical pneumonitis may develop. Small amounts of product aspirated into the respiratory system during ingestion or vomiting, due to the solvent, xylene in the product, may cause mild to severe pulmonary injury

## 3. COMPOSITION INFORMATION

Ingredient		CAS No.	Content
Active ingredient	Tebuconazole	107534-96-3	25%(w/v)
Inert	Not listed		Up to 100%

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If vapours or mists have been inhaled, and irritation has developed, remove the source of contamination or

move victim to fresh air. The patient should be kept under observation and obtain medical attention if irritation persists.

**In case of skin contact**

Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and nonabrasive soap. Obtain medical attention if irritation persists.

**In case of eye contact**

Immediately flush eyes with a stream of clean water for at least 20 minutes, holding the eyelid(s) open. Obtain medical attention immediately.

**Ingestion**

Do not induce vomiting due to the solvent. Do not give anything by mouth. Obtain medical attention immediately. If the person is alert, rinse mouth thoroughly with water.

**4.2 Advice to the physician**

There is no specific antidote available. Treat symptomatically. The product contains solvent, xylene that may cause chemical pneumonitis if aspirated into lungs. Watch for delayed onset of pulmonary. Treat poisoning victims symptomatically and supportively.

**5. FIRE FIGHTING MEASURES**

**5.1 Fire and explosion hazard**

Flash point: 75°C

Fire may release harmful carbon monoxide, carbon dioxide and oxides of nitrogen.

**5.2 Extinguishing agents**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

**5.3 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. Avoid inhaling hazardous vapours and fumes from burning materials. 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.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways. Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

**5.4 Personal protective equipment**

Fire may release harmful carbon monoxide, carbon dioxide and oxides of nitrogen and carbon. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

**6. ACCIDENTAL RELEASE MEASURES**

### 6.1 Personal precautions

Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

### 6.2 Environmental precautions

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs. Considered as Marine Pollutant.

### 6.3 Occupational spill

Do not touch-spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations. Open burning or dumping of this material is prohibited. Do not get water inside containers.

## 7. HANDLING AND STORAGE

### 7.1 Handling

Do not use near source of sparks or open flame. Harmful by inhalation, in contact with skin and if swallowed. Severe irritating to eyes and skin. Avoid contact with eyes and skin, and inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the pesticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

### 7.2 Storage

Do not store near sources of sparks, flame or heat. Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled container in isolated, dry, cool and well-ventilated area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Exposure controls

#### 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

#### Personal protective equipment

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

**Respirator**

An approved respirator suitable for protection from mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

**Clothing**

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

**Gloves**

Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.

**Eye protection**

The use of safety goggles is recommended.

**Emergency eyewash**

Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Light yellow liquid
<b>Odour</b>	Characteristic
<b>Odour threshold</b>	No data available
<b>pH</b>	4.5-8.0
<b>Melting point/freezing point</b>	No data available
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point</b>	75 °C
<b>Evaporation rate</b>	No data available
<b>Flammability (solid,gas)</b>	Flammable
<b>Upper/lower flammability or explosive limits</b>	No data available
<b>Density</b>	0.996 ± 0,05 g/ml at 20 °C
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Water Solubility</b>	Forms an emulsion in water
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Viscosity</b>	No data available

**10. STABILITY AND REACTIVITY**

**10.1 Stability**

Chemically and thermally stable.

## 10.2 Storage stability

Stable for a period of 2 years under normal warehouse conditions.

## 10.3 Conditions and Materials to Avoid

Keep the product in a cool, dry place, at below 30 OC. Protect from sunlight, open flame and sources of heat. Avoid contact with strong oxidising agents.

## 10.4 Hazardous decomposition products

Fire may release harmful carbon monoxide, carbon dioxide and oxides of nitrogen.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute oral LD50 rats

Formulation calculated: >2000 mg/kg

#### Acute dermal LD50 rats

Formulation calculated: > 2 000 mg/kg

#### Inhalation:

Harmful. Inhalation of excessive amounts may cause respiratory irritation.

#### Acute skin irritation

Moderate skin irritant. Corrosive, due to emulsifier.

#### Acute eye irritation

Severe eye irritant. May cause serious damage.

#### Dermal sensitisation

Not expected to be a skin sensitizer.

#### Chronic Effects

Based on animal studies, chronic overexposure to Tebuconazole may affect the spleen, liver, adrenals and lens of the eye.

#### Mutagenicity

Tebuconazole tested negative in several in vitro and in vivo short-term mutagenicity assays. Reproductivity and Teratogenicity

In various animal studies, the no-observable effect levels (NOEL) for developmental and reproductive toxicity for Tebuconazole were at or above the levels, which caused maternally toxic effects.

#### Carcinogenicity

No carcinogenic effects were observed in rats or mice. An increase in liver tumours was observed in mice tested at a very high Tebuconazole dose level.

One of the solvents used in the formulation of the product, TEBUCONAZOLE 250 EW is carcinogenic. **ADI: 0,03 mg/kg bw**

## 12. ECOLOGICAL INFORMATION

### 12.1 Mobility, Degradability & Accumulation

The degradation of Tebuconazole in soil was slow in laboratory studies. Under field conditions, the compound degraded much more rapidly, and did not accumulate in long-term studies (3 to 5 years). No residues could be detected in deeper soil layers of these and other studies. Adsorption/desorption studies

indicated a low mobility in the soil. Therefore, groundwater contamination through leaching can be excluded.

In natural waters, hydrolysis and indirect photolysis occur. In a pond study, the compound dissipated from the water body with DT50 of 1 to 4 weeks.

Low vapour pressure and strong adsorption result in low volatilisation into the air.

In animals, elimination of Tebuconazole was almost complete (>99%) after 3 days. Tebuconazole was excreted with the urine and the faeces.

In plants, metabolism studies show that Tebuconazole is the major terminal residue. The metabolites detected were mainly triazole-containing compounds of no toxicological relevance. In plant tissue, a mean DT50 of 12 days could be derived (cereals).

## 12.2 ECOTOXICOLOGY

Non-toxic to birds. Toxic to fish. Not toxic to bees.

### Birds

Oral LD50	Japanese quail, male:	4438 mg/kg
	Japanese quail, female:	2912 mg/kg
	Bobwhite quail:	1988 mg/kg

### Fish

LC50 (96 hours):	Rainbow trout:	4,4 mg/l
	Bluegill sunfish:	5,7 mg/l

### Daphnia

LC50 (48 hours):	Daphnia magna:	4,2 mg/l
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### Bees

LD50 (48 hours, oral):	83 µg/bee
LD50 (contact):	> 200 µg/bee

### Earthworm

LD50 (14 days):	Eisenia foetida:	1381 mg/kg dry wt soil
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## 13. DISPOSAL CONSIDERATION

### 13.1 Pesticide disposal

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal.

### 13.2 Container disposal

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

### 13.3 TRIPLE RINSE

Empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the

container three times with a volume of water equal to a minimum of one third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

#### 14. TRANSPORT INFORMATION

**UN Number: 3082**

**Road Transport ADR/RID:**

Class: 9

Packaging group: III

Shipping name: Environmentally hazardous substance, liquid, n.o.s. (Tebuconazole 250 g/l)

**Maritime Transport IMDG/IMO**

Class: 9

Packaging group: III

Shipping name: Environmentally hazardous substance, liquid, n.o.s. (Tebuconazole 250 g/l) **Considered a marine pollutant.**

#### 15. REGULATORY INFORMATION

##### 15.1 Hazard classification

Risk Phrases

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R 36/38 Irritating to eyes and skin

R 40 Limited evidence of a carcinogenic effect.

R 41 Risk of serious damage to eyes.

R 51 Toxic to aquatic organisms.

##### 15.2 Safety phrases

S 1/2 Keep locked up and out of reach children.

S 13 Keep away from food, drink and animal feeding stuffs.

S 16 Keep away from sources of ignition – No smoking.

S 23 Do not breathe vapour/spray.

S 24/25 Avoid contact with skin and eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheet.

#### 16. OTHER INFORMATION

**Disclaimer:**

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The manufacture provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. The



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