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Revision Number: 3

# Safety Data Sheet

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Product identifier

**Product Description:** Tebuzol® 3.6 Fungicide

### Other means of identification

**Product code** 12U-130  
**Registration number(s)** 70506-114

### Recommended use of the chemical and restrictions on use

**Recommended use** Fungicides.  
**Uses advised against** Activities contrary to label recommendation

### Details of the Supplier of the Safety Data Sheet

#### Supplier Address

UPL NA Inc.  
630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406

### Emergency telephone number

**Company Phone Number** 1-800-438-6071  
**Emergency telephone number** Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison Control Center  
(866) 673-6671 (24hrs)

## 2. Hazards Identification

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 3
Reproductive Toxicity	Category 2

### Label elements

#### EMERGENCY OVERVIEW

**DANGER**

#### Hazard Statements

Harmful in contact with skin  
Toxic if inhaled  
Suspected of damaging fertility or the unborn child



**Appearance** white

**Physical state** Liquid

**Odor** Chalk like

**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood  
 Wear cold insulating gloves/face shield/eye protection  
 Do not get in eyes, on skin, or on clothing  
 Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of soap and water  
 Call a POISON CENTER or doctor if you feel unwell  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards Not Otherwise Classified (HNOC)****OTHER INFORMATION**

- Toxic to aquatic life with long lasting effects
- May be harmful in contact with skin

### 3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Tebuconazole	107534-96-3	38.7

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

### 4. First aid measures

**FIRST AID MEASURES**

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a poison control center or doctor for treatment advice.
<b>Skin contact</b>	Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
<b>Inhalation</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Ingestion</b>	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
<b>Protection of First-aiders</b>	Use personal protective equipment.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Most Important Symptoms and Effects**      no data available.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician** Treat symptomatically.

## 5. Fire-fighting measures

### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>).

Use: Dry chemical. Water spray. alcohol-resistant foam.

**Unsuitable extinguishing media** no data available.

### Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

**Hazardous combustion products** Carbon monoxide. Oxides of nitrogen.

### Explosion data

### Protective equipment and precautions for firefighters

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### **Personal Precautions**

Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

### Environmental Precautions

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

### Methods and material for containment and cleaning up

#### **Methods for Clean-Up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

## 7. Handling and Storage

### Precautions for safe handling

#### **Handling**

Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Keep out of reach of children. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

#### **Storage**

Keep container tightly closed in a dry and well-ventilated place.

#### **incompatible materials**

Strong oxidizing agents.

## 8. Exposure Controls/Personal Protection

### **Exposure guidelines**

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### **Engineering controls**

Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

### Personal protective equipment

#### **Eye/Face Protection**

Use eye protection to avoid eye contact. Where there is potential for eye contact have eye

**Skin protection**  
**Respiratory protection**

flushing equipment available. Safety glasses with side-shields.  
 Wear protective gloves/clothing. Socks and footwear.  
 Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

**General hygiene considerations**

Do not eat, drink or smoke when using this product. Wear suitable gloves and eye/face protection. Wash hands and face before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

## 9. Physical and Chemical Properties

**Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid		
<b>Appearance</b>	white	<b>Odor</b>	Chalk like
<b>color</b>	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
<b>pH</b>	7.25	
<b>Melting point/freezing point</b>	8.25 °C / 47 °F	
<b>Boiling Point/Range</b>	No information available	
<b>Flash Point</b>	> 95 °C / > 200 °F	
<b>Evaporation Rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability limit in air</b>		
<b>Upper Flammability Limit</b>	No information available	
<b>Lower Flammability Limit</b>	No information available	
<b>vapor pressure</b>	No information available	
<b>Vapor Density</b>	No information available	
<b>Specific gravity</b>	1.033 @ 20 C	
<b>Water solubility</b>	No information available	
<b>Solubility in Other Solvents</b>	No information available	
<b>Partition coefficient: n-octanol/water</b>	No information available	
<b>Autoignition temperature</b>	no data available	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity, kinematic</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

**OTHER INFORMATION**

<b>Softening point</b>	No information available
<b>molecular weight</b>	No information available
<b>VOC Content</b>	No information available
<b>Liquid Density</b>	No information available

## 10. Stability and Reactivity

**Reactivity**

no data available

**Chemical stability**

Stable under normal conditions. Hazardous polymerisation does not occur.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerisation does not occur.

**Conditions to avoid**

Heating in air.

**incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Carbon oxides. Nitrogen oxides (NOx).

**11. Toxicological Information****Information on Likely Routes of Exposure****Inhalation**

Harmful by inhalation.

**Eye contact**

May cause slight irritation.

**Skin contact**

May cause irritation. May be absorbed through the skin in harmful amounts.

**Ingestion**

HARMFUL IF SWALLOWED.

**Component Information**

Tebuconazole 3.6 :Acute oral LD50 (rat) = >5,000 mg/kg  
 Acute dermal LD50 (rat) = >2,000 mg/kg  
 Acute inhalation LC50 = >2.66 mg/L air (maximum achievable breathing zone concentration)  
 4 hr No deaths  
 Eye irritation (rabbit): Minimal irritation to the conjunctiva was observed with all irritation resolving within 72 hours  
 Skin irritation (rabbit): Slight dermal irritant  
 Sensitization (guinea pig): Not a dermal sensitizer

**Information on Toxicological Effects****Symptoms**

No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Sensitization**

No information available.

**Mutagenic effects**

no data available.

**Carcinogenicity**

Tebuconazole (active ingredient):

Subchronic toxicity=

In dermal studies with rabbits the NOEL was 1000 mg/kg.

A three-week inhalation study with rats the NOEL was 10.6 mg/m<sup>3</sup>.

Chronic toxicity=

In chronic dog studies, tebuconazole was administered for 52 weeks at dietary concentrations of 40, 100, 150, 200, or 1000 ppm.

Due to lack of significant effects, the high dose was increased to 2,000 ppm at 40 weeks for the remainder of the study. At the high dose, effects relating to liver, spleen, ocular and adrenal were observed. The overall NOEL from these studies was 100 ppm based on adrenal effects. In a 2-year study, tebuconazole was administered to rats at dietary concentrations of 100, 300 or 1,000 ppm. There was a reduction in body weight gains and an increased incidence of liver and spleen effects at the high dose. The NOEL was 300 ppm.

Carcinogenicity:

There was no indication of a carcinogenic effect in rats or mice when tested at dose levels up to and including the maximum tolerated dose (MTD) for each species. An increased incidence of heptaocellular neoplasms occurred in mice at dose level approximately three fold greater than the MTD.

**Mutagenicity:**

In vitro and in vivo mutagenicity studies conducted on tebuconazole have been negative.

**Developmental toxicity:**

In mice treated at dose levels ranging from 1-1,000 mg/kg, the NOELs for maternal and developmental toxicity were 3 and 10 mg/kg respectively. In rats treated at dose levels of 30, 60, or 120 mg/kg, the NOELs for maternal and developmental toxicity were 30 and 60 mg/kg respectively. For rabbits, the NOELs for maternal and developmental toxicity were less than 10 and 30 mg/kg respectively.

In dermal teratology studies on rats and mice, tebuconazole was administered during gestation at dose levels of 100, 300 or 1,000 mg/kg. In rats, there was no indication of maternal and developmental toxicity were 100 and 300 mg/kg respectively.

**Reproduction:**

In a reproduction study in rats, smaller litter sizes and decreased pup weight gain was observed in conjunction with maternal toxicity at the high concentration. The maternal and reproductive NOEL was 300 ppm.

**Neurotoxicity:**

In an acute neurotoxicity screening study, tebuconazole was administered to rats as a single oral dose at doses of 100, 500 or 1000 mg/kg for males and 100, 250, or 500 mg/kg for females. Treatment related clinical signs of toxicity and transient neurobehavioral effects were evident in both sexes. There were no treatment related microscopic lesions within the skeletal muscle or neural tissues. Based on these results the NOEL for neuropathology was 1000 mg/kg for males and 500 mg/kg for females, the highest dose tested. The overall NOEL was less than 100 mg/kg for both sexes. In a 13 week neurotoxicity screening study in rats, body weight and food consumption was reduced at the high dose, functional observational battery (FOB) and automated measures of motor and locomotor activity were not affected by treatment, there were no treatment related microscopic lesions in neural tissues or skeletal muscle in any of the treated animals, and there was no evidence of neurotoxicity at any dietary concentration. The NOEL for overall toxicity was 400 ppm. In one generation developmental neurotoxicity study, tebuconazole was administered to rats during gestation and postnatal development. Maternal toxicity observed included decreased body weight and feed consumption, mortality, prolonged gestation, and alopecia. Effects observed in the offspring included mortality, developmental delay, and decrease in number of liveborn, viability index, body weight gain, absolute brain weight and cerebellar thickness. Tebuconazole did not cause any specific neurobehavioral effects in the offspring. The NOEL for both maternal and F1 offspring toxicity was 300 ppm.

**Reproductive effects****STOT - Single Exposure****STOT - Repeated Exposure****Chronic toxicity****Aspiration hazard**

Not Available.

no data available.

no data available.

Avoid repeated exposure.

No information available.

**Numerical Measures of Toxicity - No information available****LD50 Oral**

&gt; 5000 mg/kg

**LD50 Dermal**

&gt; 2000 mg/kg

**LC50 Inhalation**

LC50/inhalation/4h/rat = &gt; 2.66

**12. Ecological Information****ecotoxicity**

Tebuconazole

FISH

LC50 96 hr Bluegill sunfish = 5.7 mg/L

LC50 96 hr Trout 4.4 mg/L

BIRD

Acute oral LD50 Bobwhite quail = 1998 mg/kg  
 Acute oral LD50 Japanese quail = 2912-4438 mg/kg  
 Moderately toxic to fish and aquatic organisms.  
 Half life 2-3 months in natural water. Strongly bound to soil and has low mobility.

**Persistence/Degradability**

no data available.

**Bioaccumulation/ Accumulation**

Does not bioaccumulate.

**Other Adverse Effects**

no data available

### 13. Disposal Considerations

**Waste Treatment Methods**

<b>Waste Disposal Method</b>	Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
<b>Contaminated packaging</b>	Refer to product label.

### 14. Transport Information

<b><u>DOT</u></b>	NOT REGULATED
<b><u>TDG</u></b>	NOT REGULATED
<b><u>IATA</u></b>	NOT REGULATED
<b><u>IMDG</u></b>	NOT REGULATED

### 15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**signal word** CAUTION

**Ventilation Control** PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

**Keep out of Reach of Children. Harmful if swallowed. Harmful if inhaled or absorbed through skin. Toxic to birds,**

mammals, fish and aquatic invertebrates.

### International Inventories

USINV	Not present
DSL/NDSL	Not present
EINECS/ ELINCS	Not Present
ENCS	Not Present
China	Not Present
KECL	Not Present
PICCS	Not Present
AICS	Not Present
TSCA	Not Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

### Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### CERCLA

Not applicable

#### CERCLA

SARA Product RQ 0

#### RCRA

### Pesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Tebuconazole 107534-96-3 ( 38.7 )			X	

### State Regulations

#### State Right-to-Know

Not applicable

### International regulations

#### U.S. EPA Label information

EPA Pesticide registration number 70506-114

## 16. Other Information

NFPA HEALTH 1 flammability 0 Instability 0 Physical hazard -

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Revision Summary

Update logo Update section 1 Update Section 16

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**End of SDS**