



Safety Data Sheet

Preparation Date 12-Jun-2017

Revision date 08-Aug-2024

Revision Number: 2

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

Identification of the product

Product Description STartUP TEBUZ Seed Treatment

Other means of identification

Internal SDS code 12U-340

Registration number(s) 70506-340

Recommended use of the chemical and restrictions on use

Recommended use Solution for seed treatment.

Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

UPL NA Inc.

PO Box 12219

Research Triangle Park, NC 27709-12219

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 and Drug Safety (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
Skin sensitization	Category 1
Reproductive Toxicity	Category 2

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard Statements

Harmful in contact with skin

May cause an allergic skin reaction

Suspected of damaging fertility or the unborn child



Appearance liquid	Physical state suspension	Odor no data available
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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
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

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 skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

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

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**

Eye contact	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.
Skin contact	Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	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.
Ingestion	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
Protection of First-aiders	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 (CO₂).

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	flushing equipment available. Safety glasses with side-shields.
Respiratory protection	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

9.1 Information on basic physical and chemical properties

Appearance	liquid	
Physical state	suspension	
Odor	no data available	
color	Off-white	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	7.25	Approximately
Melting point/freezing point		None known
Boiling Point/Range		None known
Flash Point	No information available	None known
Evaporation Rate		None known
Flammability (solid, gas)		None known
Vapor pressure	Specified Class 1 Substances PRTR	
Specific gravity	1.100 g/mL	None known
Bulk density		None known
Water solubility		Dispersible
Solubility in Other Solvents	No information available	None known
Partition coefficient: n-octanol/water		None known
Autoignition temperature		None known
Decomposition temperature		None known
Viscosity		None known

9.2 OTHER INFORMATION- NONE

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.
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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.

Components Information

Information based on available tox data on similar formulations:

Tebuconazole 3.6 :Acute oral LD50 (rat) = >5,000 mg/kgAcute dermal LD50 (rat) = >2,000 mg/kgAcute inhalation LC50 = >2.66 mg/L air (maximum achievable breathing zone concentration) 4 hr No deathsEye irritation (rabbit): Minimal irritation to the conjunctiva was observed with all irritation resolving within 72 hoursSkin irritation (rabbit): Slight dermal irritantSensitization (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/m³.

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.
Not Available.
no data available.
no data available.
Avoid repeated exposure.
No information available.

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

Numerical Measures of Toxicity - No information available

LD50 Oral > 5000 mg/kg
LD50 Dermal > 2000 mg/kg

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

Bioaccumulative potential.

Chemical name	Log Pow
Tebuconazole 107534-96-3	3.5

Other Adverse Effects

no data available

13. Disposal Considerations**Waste Treatment Methods****Waste Disposal Method**

Pesticide wastes can be 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.

Contaminated packaging

Refer to product label.

14. Transport Information**DOT**

When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.

When shipped in bulk, by vessel, or internationally refer to the IMDG shipping description:

TDG

When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1

In bulk, by vessel or internationally - use IMDG description

IATA**UN/ID no****Proper shipping name****Hazard class****Packing group****Description**

Single or inner packagings less than 5L (liquid) or 5kg net (solids) are excepted from the Dangerous Goods regulations (IATA Special provision A197)

UN3082

Environmentally hazardous substances, liquid, n.o.s (Tebuconazole solution)

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PG III

IMDG - Marine Pollutant

IMDG**UN/ID no****Proper shipping name****Hazard class****Packing group****Environmental hazards**

Single or inner packaging less than 5L (liquid) or 5 kg net (solids) are excepted from the Dangerous Goods regulations (IMDG 2.10.2.7)

UN3082

Environmentally hazardous substances, liquid, n.o.s (Tebuconazole solution)

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PG III

IMDG - Marine Pollutant

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

Harmful if swallowed or absorbed through the skin. Harmful if inhaled. Keep out of Reach of Children. Pesticide is toxic to mammals. Toxic to fish and aquatic invertebrates.

International Inventories

USINV	Not present
DSL/NDL	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/NDL - 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****International regulations****U.S. EPA Label information**

EPA Pesticide registration number 70506-340

16. Other Information**NFPA**

HEALTH 1

flammability 0

Instability 0

Physical hazard -

Preparation Date 12-Jun-2017

Revision date 08-Aug-2024

Revision Summary

Update address Update product name

Disclaimer

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End of SDS