

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
 Product name : PAVADO TBZ
 EPA Reg. No. : 89167-135-89391

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Broad-spectrum systemic fungicide

1.4. Supplier's details

INNICTIS® CROP CARE, LLC
 1880 Fall River Drive, Suite 100
 Loveland, CO, USA, 80538
 T 855-466-8428

1.5. Emergency phone number

Emergency number : ChemTrec 1-800-424-9300

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Health Hazards	Category
Reproductive Toxicity	2
Carcinogenicity	2
Acute toxicity, inhalation	4
Physical Hazards	
None	-
Environmental Hazards	
Hazardous to the aquatic environment, short-term (acute)	1
Hazardous to the aquatic environment, long-term (chronic)	1

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US)

Warning

Hazard statements (GHS US)

H332 - Harmful if inhaled.

H351 - Suspected of causing cancer.

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Precautionary statements (GHS US)

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.
P203 - Obtain, read and follow all safety instructions before use.
P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves.
P304+P340+P317 – Get medical help. If inhaled: Remove person to fresh air and keep comfortable for breathing.
P318 - IF exposed or concerned, get medical advice.
P273 - Avoid release to the environment. Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Proprietary (non-hazardous)	CAS-No.: Not Applicable	62
tebuconazole	CAS-No.: 107534-96-3	19
prothioconazole	CAS-No.: 178928-70-6	19

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general

: If you feel unwell, seek medical advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at **1-800-424-9300** for emergency medical treatment information. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC day or night. Within USA and Canada: 1-800-424-9300 or 1-703-527-3887 (collect calls accepted).

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

- Symptoms/effects after inhalation : None under normal conditions.
- Symptoms/effects after skin contact : None under normal conditions.
- Symptoms/effects after eye contact : None under normal conditions.
- Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

- NOTE TO PHYSICIAN : No specific antidote. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Flash Point : Not available.
- Fire hazard : No fire hazard.
- Explosion hazard : No direct explosion hazard.
- Hazardous decomposition products in case of fire : Toxic fumes may be released. In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Sulphur oxides, Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x).

NFPA Ratings: Health - 1/ Flammability - 1/ Reactivity - 0

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Evacuate area of all unnecessary personnel. Fight fire from safe distance and protected location upwind. Do not enter fire area without proper protective equipment, including respiratory protection. Contain contaminated water/ firefighting water; do not allow to enter drains or waterways. Use foam or dry chemical fire extinguishing systems to prevent environmental damage from excessive water runoff. Decontaminate fire fighting gear and personal protective equipment before reuse.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment. Isolate area and keep unnecessary and unprotected personnel from entering.
- Emergency procedures : Ventilate spillage area.

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For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.
- Environmental precautions : Avoid release to the environment. Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to oil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

6.2. Methods and materials for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.
Dispose of materials or solid residues at an authorized site.

For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Ensure good ventilation of the work station. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

- Technical measures : Keep in a cool, dry, well-ventilated place away from heat.
- Storage conditions : Keep cool. Protect from sunlight.
- Packaging materials : Store always product in original container of same material as original container and out of reach of children, preferably in a locked storage area.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Prothioconazole	178928-70-6	1.4 mg/m ³ (SK-ABS)		OES BCS*
Tebuconazole	107534-96-3	0.2 mg/m ³ (SK-ABS)		OES BCS*

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.
- Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing including long sleeve shirt and long pants, chemical resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, Viton ≥ 14 mils, and shoes plus socks.
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment symbol(s):



*OES BCS Internal Bayer AG Crop Science Division "Occupational Exposure Standard".

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Appearance	: Liquid.
Color	: White
Odor	: Odorless
Odor threshold	: No data available
pH	: 5.5 – 6.5
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Bulk Density	: ≈ 1.1401 g/ml
Solubility	: ≈ 3.45 Pa·s
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: ≈ 4.36 Pa·s
Explosion limits	: No data available
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available.

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SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal use and storage conditions.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight, freezing.

10.5. Incompatible materials

Incompatible with strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Information presented below is from testing done on an identical or substantially similar product.

Toxicology Specifics	
LD50 oral rat	>2000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rat	> 5050 mg/kg (Rat, Experimental value, Dermal)
LC50 Inhalation – Rat	> 2.18 mg/l (liquid aerosol 4 h), Rat, Experimental value, Inhalation) Highest Concentration Tested. No deaths.
ATE US (oral)	1700 mg/kg body weight
EYE IRRITATION	Minimally Irritating (Rabbit)
SKIN IRRITATION	No skin irritation (Rabbit)
SKIN SENSITIZATION	Non-sensitizing (Guinea Pig)
CARCINOGENICITY	Not likely to be carcinogenic to humans (prothioconazole) Group C: Possible human carcinogen (tebuconazole).
EPA	Not listed
ACGIN	Not listed
NTP	Not listed
IARC	Not listed

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Toxicology Specifics

OSHA	Not listed
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MUTAGENIC TOXICITY: Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests. Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

REPRODUCTIVE TOXICITY: Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity. Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.

DEVELOPMENT TOXICITY: Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity. Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.

OTHER TOXICITY: None known.

SECTION 12 Ecological information

Prothioconazole and tebuconazole are moderately toxic to freshwater invertebrates on an acute exposure basis. Prothioconazole is moderately toxic while tebuconazole is highly toxic to estuarine/marine invertebrates on an acute exposure basis. Prothioconazole is also toxic to aquatic plants.

tebuconazole (107534-96-3)

Rainbow Trout (96-hr LC50): 2.27 mg/ L
Fathead Minnow (18-weeks NOAEC): 0.011 mg/ L
Sheepshead Minnow (96-hr LC50): 5.9 mg/ L
Sheepshead Minnow (27-weeks NOAEC) 0.019 mg/ L
Water Flea (48-hr LC50): 2.8 mg/ L
Water Flea (3-weeks NOAEC): 0.12 mg/ L
Mysid Shrimp (96-hour LC50): 0.49 mg/ L
Mysid Shrimp (4-weeks NOAEC): 0.035 mg/ L
Duckweed (EC50): 0.151 mg/ L
Diatom (EC50): 0.17 mg/ L; (NOAEC): 0.05 mg/ L
Bobwhite quail (LD50): 1,988 mg/ kg-bw
Bobwhite quail (29-weeks NOAEC): 73.5 mg/ kg-diet
Honeybee (LD50): 100 µg/ bee
Honeybee (NOAEL): < 2.13 µg/ bee/day

prothioconazole (178928-70-6)

Rainbow Trout (96-hr LC50): 1.83 mg/ L; (NOAEC): 0.49 mg/ L
Sheepshead Minnow (96-hr LC50): 10.3 mg/ L
Water Flea (48-hr EC50): 1.2 mg/ L; (NOAEC) 0.56 mg/ L
Mysid (96-hour LC50): 0.06 mg/ L (prothioconazole-desthio)
Algae (96-hr EC50): >0.1638 mg/ L; (NOAEC): 0.042 mg/ L
Duckweed (7-day EC50): 0.074 mg/ L; (NOAEC): .00034 mg/ L
Northern Bobwhite Quail (14-day LD50): >2,000 mg/ kg-bw
Honeybee (48-hour LD50): >200 µg/ bee

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SECTION 13 Disposal considerations

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use 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.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

SECTION 14 Transport information

UN Information

UN-No. (DOT)- Not Regulated

IMDG:

Shipped internationally by vessel:

UN3082, Environmentally hazardous substance, liquid, N.O.S. (prothio-conazole, tebuconazole), 9, PG III, Marine Pollutant

ATA:

Shipped internationally by air:

UN3082, Environmentally hazardous substance, liquid, N.O.S. (prothio-conazole, tebuconazole), 9, PG III, Marine Pollutant

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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SECTION 15 Regulatory information

Federal regulations

FIFRA –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. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Avoid contact with skin, eyes and clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to mammals, fish, aquatic invertebrates, and freshwater/estuarine/marine aquatic plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

Ground Water Advisory: Prothioconazole-desthio (a degradate of prothioconazole) and tebuconazole are known to leach through soil into ground water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory: This product may impact surface water quality due to runoff rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of prothioconazole and degradates from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

SARA Title III – Section 311/ 312 Hazard Categories

Immediate (Acute), Delayed (Chronic)

SARA Title III – Section 312 Threshold Planning Quantity

Not listed

SARA Title III – Section 313 Reportable Ingredients

Not listed

CERCLA Reportable Quantity (RQ) –

Not listed

CALIFORNIA PROP 65 STATUS –This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

CANADA –This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.