

## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION


**PRODUCT NAME:** Thidiazuron (TDZ) Solution (1 mg/mL in DMSO)  
**PRODUCT NUMBER:** T7999  
**COMPANY INFO:** PhytoTech Labs Inc.  
 14610 W 106<sup>th</sup> St. Lenexa, KS 66215  
 Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442  
 www.phytotechlab.com  
**EMERGENCY PHONE NUMBER (INFOTRAC):** 1-800-535-5053 - US Only  
 1-352-323-3500 - International  
**RECOMMENDED USE:** For Research Use Only  
**RESTRICTIONS ON USE:** Products sold by PhytoTech Labs Inc. are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture:

**GHS Classification:**  
 H227 – Flammable liquids (Category 4)

### GHS Label elements, including hazard and precautionary statements:

**Pictogram:** 

**Signal Word:** **Warning**

**Hazard Statements:**  
 H227 – Combustible liquid.

**Precautionary Statements:**  
 P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
 P280 – Wear protective clothing/protective gloves/eye protection/face protection.  
 P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms:** 1-Phenyl-3-(1,2,3-thiadiazol-5-yl)urea; TDZ  
**CAS No.:** 51707-55-2  
**Formula:** C<sub>9</sub>H<sub>8</sub>N<sub>4</sub>OS  
**Molecular Weight:** 220.27 g/mol  
**EC No.:** 257-356-7

| Ingredient         | CAS Number | Percent | Hazardous                                       |
|--------------------|------------|---------|---|
| Thidiazuron        | 51707-55-2 | 0.1 %   | No exposure limits established by OSHA or ACGIH |
| Dimethyl Sulfoxide | 67-68-5    | >99 %   | No exposure limits established by OSHA or ACGIH |

## 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

| <b>Route of Entry</b> | <b>Symptoms</b>   | <b>First Aid Procedures</b>  |
|-----------------------|---|--|
| Ingestion             | May cause irritation if swallowed   | If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. <b>Get medical attention.</b>  |
| Inhalation            | May cause irritation to respiratory tract   | Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. <b>Get medical attention.</b>    |
| Eye Contact           | Direct contact may cause irritation. May cause redness, tearing, or blurred vision. | Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b> |
| Skin Contact          | Irritating. May cause reddening, itching or inflammation.                           | Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>  |

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

## 5. FIRE FIGHTING MEASURES

|   |   |
|---|---|
| Suitable Extinguishing Media:                                 | Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.                                       |
| Special Protective Equipment and Precaution for Firefighters: | In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance. |
| Hazardous Combustion Products:                                | May emit toxic fumes under fire conditions.   |

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

|                                    |  |
|------------------------------------|--|
| Environmental Precautions:         | Prevent further leakage or spillage if safe to do so. Do not let product enter drains.   |
| Method of Containment and Cleanup: | Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let product enter drains. |

## 7. HANDLING AND STORAGE

|                                  |   |
|----------------------------------|---|
| Precaution for Safe Handling:    | Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Keep away from combustible materials. Keep away from heat and sources of ignition. Wash thoroughly after use. |
| Conditions for Safe Storage:     | Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Product is hygroscopic.  |
| Incompatibilities:               | Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents   |
| Recommended Storage Temperature: | -20 °C  |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

|  |      |
|--|------|
| OSHA's Permissible Exposure Limits (PELs): | None |
| Threshold Limit Values (TLVs):             | None |

Engineering Controls: Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

Eye/Face Protection: Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.

Skin Protection: Protective gloves

Body Protection: Lab coat

Respiratory Protection: Wear appropriate dust mask  
A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless, Clear Liquid

pH: No data available

Solubility: Miscible with Water

Melting Range: No data available

Vapor Density: No data available

Vapor Pressure: No data available

Specific Gravity: No data available

Odor: Odorless

Odor Threshold: No data available

Viscosity: No data available

Relative Density: 1.1 g/mL

Evaporation Rate: No data available

Initial Boiling Point and Boiling Range: No data available

Flammability (solid, gas): No data available

Partition coefficient: No data available  
n-octanol/water):

Auto-ignition Temperature: No data available

Decomposition Temperature: No data available

Flash Point (Closed Cup): No data available

Flammable Limits: Upper –No data available Lower – No data available

## 10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under normal conditions of use

Possibility of Hazard Reactions: No data available

Conditions to Avoid: Moisture, sources of ignition, high temperatures, incompatibles

Incompatibles Materials: Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, sulfur oxides

## 11. TOXICOLOGICAL INFORMATION

Toxicity: LD<sub>50</sub> (Oral-Rat)(mg/Kg) 14,500  
LD<sub>50</sub> (IP-Rat)(mg/Kg) 200

LD<sub>50</sub> (IV-Mouse)(mg/Kg) 3,100

Carcinogenicity: NTP: No  
IARC: No  
OSHA Reg: No

Reproductive Toxicity: No data available

Specific Target Organ Toxicity: Single Exposure: No data available  
Repeated Exposure: No data available

Target Organs: No data available

Routes of Entry: Ingestion, inhalation, skin and eye contact

NIOSH/RTECS NO: PV6210000

*The toxicological properties of this product have not been thoroughly investigated*

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: LC50 – fathead minnow – 34,000 mg/L – 96 hrs  
LC50 – rainbow trout – 35,000 mg/L – 96 hrs  
EC50 – water flea – 27,500 mg/L

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effects: No data available

## 13. DISPOSAL CONSIDERATION

Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

## 14. TRANSPORT INFORMATION

Domestic (D.O.T.): Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: None Packing Group: None  
UN/NA: None  
Marine Pollutant: No  
Poison Inhalation Hazard: No  
Labels: Combustible

International:

IMDG: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

IATA: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

## 15. REGULATORY INFORMATION

**TSCA:** No

### SARA TITLE III:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right to Know Components:** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right to Know Components:** This product is not listed on the Pennsylvania Code's Hazardous Substance List (Chapter 323).

**New Jersey Right to Know Components:** This product is not listed amongst the New Jersey Right to Know Hazardous Substance Fact Sheets

**California Prop. 65 Components:** This product is not known to the State of California to cause cancer or reproductive toxicity.

## 16. OTHER INFORMATION

|              |                      |                     |                        |                            |
|--------------|----------------------|---------------------|------------------------|----------------------------|
| HMIS Rating: | <b>Health Hazard</b> | <b>Flammability</b> | <b>Physical Hazard</b> | <b>Personal Protection</b> |
|              | 0                    | 2                   | 0                      | B                          |
| NFPA Rating: | <b>Health Hazard</b> | <b>Fire Hazard</b>  | <b>Instability</b>     | <b>Special Hazard</b>      |
|              | 0                    | 2                   | 0                      |                            |

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