



SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Thidiazuron (TDZ) Solution (1 mg/mL in DMSO)
PRODUCT NUMBER: T7999
COMPANY INFO: *PhytoTechnology Laboratories*®
PO Box 12205, Shawnee, KS 66282-2205
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EMERGENCY PHONE NUMBER: 1-800-535-5053 - US Only
1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by *PhytoTechnology Laboratories*® 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 in accordance with 29 CFR 1910 (OSHA HCS):

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 1-Phenyl-3-(1,2,3-thidiazol-5-yl)urea; TDZ

CAS No.: 51707-55-2

Formula: C₉H₈N₄OS

Molecular Weight: 220.25 g/mol

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.

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.
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. Get medical attention.
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. Get medical attention if irritation persists.
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation persists.

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:

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

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. Above 87 C, explosive vapor/air mixtures may be formed

Toxic Gases Produced:

Carbon dioxide, carbon monoxide, sulfur oxides

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. 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:

Clean-up personnel should wear proper protective equipment and clothing. Contain spilled material and do not let product enter drains. Soak up with inert absorbent material and place in a suitable, closed container for disposal in accordance with all local, state/provincial, and national requirements. Ventilate the area if necessary. Do not let products enter drains.

7. HANDLING AND STORAGE

Precaution for Safe Handling:

Avoid contact with skin and eyes. Avoid incompatible substances. Keep away from a source of ignition. No smoking. Take measures to prevent the build up of electrostatic charge. Wash thoroughly after use.

Conditions for Safe Storage:

Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Very hygroscopic substance. Protect from moisture.

Incompatibilities:

Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents

Recommended Storage Temperature: -20 to 0 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs): No data available

Threshold Limit Values (TLVs): No data available

Workplace Environmental Exposure Levels (WEEL): No data available

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: Appropriate respirator

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 – Material is very hygroscopic, material is combustible

Possibility of Hazard Reactions: Will not occur

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 ₅₀ (Oral-Rat)(mg/Kg):	14,500
	LD ₅₀ (IP-Rat)(mg/Kg):	200
	LD ₅₀ (IV-Mouse)(mg/Kg):	3100
	LD ₅₀ (Dermal-Rabbit)(mg/Kg):	>5000
Carcinogenicity:	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No
Reproductive Toxicity:	No data available	
Symptoms Associated with Overexposure:	Irritation, itching, gastrointestinal upset, dermatitis, corneal damage, possible mutagenic, tumorigenic, and reproductive effects, muscular weakness, fetal death, heart problems, cyanosis, breathing difficulties	
Specific Target Organ Toxicity:	Single Exposure:	No data available
	Repeated Exposure:	No data available
Target Organs:	Respiratory system, skin, eyes, blood, liver, central nervous system	
Medical Conditions Aggravated By Exposure:	Central nervous system or cardiac impairment	
Routes of Entry:	Inhalation, skin and eye contact	
NIOSH/RTECS NO:	PV6210000	

The toxicological properties of this product have not been thoroughly investigated

12. ECOLOGICAL INFORMATION

Toxicity:	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.
EPA Hazardous Waste Number:	No data available

14. TRANSPORT INFORMATION

Domestic (D.O.T.):	Proper Shipping Name:	Combustible liquid, n.o.s. (Dimethyl sulfoxide)	
	Hazard Class:	None	Packing Group: III
	UN/NA:	NA #:1993	
	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: Fire 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: CAS NO.: 67-68-5 Dimethyl sulfoxide

New Jersey Right to Know Components: CAS NO.: 67-68-5 Dimethyl sulfoxide

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating:	Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
	0	*	2	0
NFPA Rating:	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
	0	2	0	

*Chronic Hazard: Chronic (long-term) health effects may result from repeated overexposure.

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