SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Thidiazuron, Crystalline

SKU NUMBER: TDZ

COMPANY INFO: Plant Cell Technology Inc.
1601 Connecticut Ave, Suite 400, Washington DC 20009
+1 (202) 506-5608
www.plantcelltechnology.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 Plant Cell Technology® 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:

H315 – Causes skin irritation (Category 2)
H319 – Causes serious eye irritation (Category 2A).
H335 – Specific target organ toxicity – single exposure – Respiratory system (Category 3)
H400 – Acute aquatic toxicity (Category 1)
H410 – Chronic aquatic toxicity (Category 1)

GHS Label elements, including hazard and precautionary statements:

Pictogram :



Signal Word: Warning

Hazard Statements:

H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H410 – Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P261 – Avoid breathing dust.
P273 – Avoid release to the environment.
P280 – Wear protective clothing.
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: $C_9H_8N_4OS$

Molecular Weight: 220.27

EC No.: 257-356-7

Ingredient	CAS Number	Percent	Hazardous
Thidiazuron	51707-55-2	>97 %	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: 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: Strong oxidizing agent

Recommended Storage Temperature: 2 to 8°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:	White to Off-White Powder or Crystals
pH:	No data available
Solubility:	Soluble in DMSO, KOH, MeOH
Melting Range:	213-217 °C (dec)
Vapor Density:	No data available
Vapor Pressure:	No data available
Odor:	Odorless
Odor Threshold:	No data available
Viscosity:	No data available
Relative Density:	No data available
Evaporation Rate:	No data available
Initial Boiling Point and Boiling Range:	No data available
Flammability (solid, gas):	No data available
Partition coefficient: n-octanol/water):	No data available
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:	Incompatibles
Incompatibles Materials:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides

11. TOXICOLOGICAL INFORMATION

Toxicity:	LD_{50} (Oral-Rat)(mg/Kg)	5350
	LD_{50} (IV-Mouse)(mg/Kg)	2300
	LD_{50} (Dermal-Mouse)(mg/Kg)	>1,000

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:	No data available	

The toxicological properties of this product have not been thoroughly investigated

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Toxicity to Firsh: LC50 - Oncorhynchus mykiss (rainbow trout) - > 19 mg/l - 96 h Toxicity to daphnia: EC50 - Daphnia magna (Water flea) - 10 mg/l - 48 h
Persistence and Degradability:	No data available
Bioaccumulative Potential:	No data available
Mobility in Soil:	No data available
Other Adverse Effects:	Toxic to aquatic life

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:	N/A		
	UN/NA:	N/A		
	Labels:	N/A		
International:				
IMDG:	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1-Phenyl-3-(1,2,3- thiadiazol-5-yl)urea)		
	Hazard Class:	9		
	UN:	3077	Packing group: III	EMS-No.: F-A, S-F
	Marine pollutant:	Yes		
IATA:	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1-Phenyl-3-(1,2,3- thiadiazol-5-yl)urea)		
	Hazard Class:	9		
	UN:	3077	Packing group: III	EMS-No.: F-A, S-F
	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:	**Health Hazard**	**Flammability**	**Physical Hazard**	**Personal Protection**
	0	0	0	B
NFPA Rating:	**Health Hazard**	**Fire Hazard**	**Instability**	**Special Hazard**
	0	0	0	

Plant Cell Technology provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. Plant Cell Technology shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.

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