



MATERIAL SAFETY DATA SHEET

THIDIAZURON

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : 1-Phenyl-3-(1,2,3,-thiadiazol-5-yl)-urea
Common chemical name : Thidiazuron
Synonyms : TDZ
Chemical formula : $C_9H_8N_4OS = 220.2$
CAS no. : 51707-55-2
EC no. : 257-356-7
Supplier's name : Duchefa Biochemie B.V..
Supplier's address : A. Hofmanweg 71
2031 BH Haarlem
The Netherlands
Emergency telephone : (+31) - (0)23 - 5319093

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation:

Chemical name	CAS no.	% (w/w)	Symbol	R phrases
Thidiazuron	51707-55-2	> 95	Xi	36/37/38

3. HAZARDS IDENTIFICATION

Physical/chemical hazards : --
Environmental hazards : --
Effect(s) of (over)exposure : Harmful in contact with skin
Symptom(s) of (over)exposure :
Inhalation : Irritating to respiratory system
Ingestion : Irritating to respiratory system
Skin contact : Harmful in contact with skin
Eye contact : Irritating to eyes
Aggravating conditions : --

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4. FIRST AID MEASURES

Fresh air. If you feel unwell seek medical advice and show the MSDS if possible

- SKIN CONTACT : Take off contaminated clothes immediately. Wash skin with soap and copious amounts of water.
- EYE CONTACT : Rinse eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
- INGESTION, INHALATION : If swallowed, wash out mouth with water, provided person is conscious. Always consult a doctor.
If inhaled, remove to fresh air. If not breathing give artificial respiration. Always consult a doctor.
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5. FIRE FIGHTING MEASURES

Extinguishing media

- Suitable : Fight fire with water mist, CO₂, foam or powder.
- Hazardous thermal decomposition and combustion products : Could cause fire in high temperatures. When heated to decomposition material emit toxic fumes (NO_x and SO_x).
- Special fire fighting procedures : None
- Protection of fire-fighters : Fire-fighters must wear self contained breathing equipments and impervious clothing.
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6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Avoid contact with skin and eyes.
Do not swallow.
Do not breathe dust.
- Environmental precautions : None
- Methods for cleaning up : Remove spilled material with water. Place into appropriate container for disposal. Avoid dust. Ventilate and wash spill area. Wear suitable protective clothing. Use rubber gloves and eye/face protection.
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7. HANDLING AND STORAGE

Handling	:	Use with adequate ventilation. Use rubber gloves, face mask, safety goggles.
Storage	:	Store at room temperature in tightly closed container.
Packaging materials	:	Glass or plastic containers

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures	:	Safety shower and eye bath. Mechanical exhaust required.
Hygienic measures	:	Do not eat, drink and/or smoke during work. Wash after handling
Personal protection		
Respiratory system	:	Do not inhale powder. Wear a dust mask
Skin and body	:	Use protective clothing. Wash skin properly after work.
Hands	:	Use rubber gloves
Eyes	:	Use eye/face protection
Occupational exposure limits		
TLV (USA)	:	--
"MAK" (Germany)	:	--
MAC (Netherlands)	:	--

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Crystalline powder
Colour	:	Colourless
Odour	:	weak
Melting point	:	213°C with decomposition
Boiling point	:	--
Density	:	--
Solubility	:	Soluble in DMSO, organic solvents Non soluble in water
Flash point	:	> 100°C.
Lower explosion limit	:	--
Upper explosion limit	:	--

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10. STABILITY AND REACTIVITY

Stability	:	Stable at room temperature
Conditions to avoid	:	--
Materials to avoid	:	strong oxidizing agents
Hazardous decomposition	:	
Products	:	Toxic fumes of CO _x , NO _x , SO ₂
Hazardous polymerization	:	None

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Intravenous	:	--
Oral	:	LD ₅₀ (rat) 5350 mg/kg LD ₅₀ (mouse) 3740 mg/kg LD ₅₀ (rabbit) 7100 mg/kg LD ₅₀ (guinea pig) 2813 mg/kg LD ₅₀ (quail) >16000 mg/kg
Dermal	:	LD ₅₀ rat >1 g/kg LD ₅₀ rabbit >1 g/kg
Inhalation	:	LC ₅₀ rat >2.3 mg/l (Exposure time: 4 hours)
Intraperitoneal	:	LD ₅₀ (rat) : 4200 mg/kg
Eye irritation	:	can cause eye irritation
Skin irritation	:	can cause skin irritation
Sensitization	:	--
Chronic toxicity	:	Rat (oral, 813 mg/kg for 76 days) paternal effects: spermatogenesis (including genetic material, sperm morphology, motility, and count)
Carcinogenicity	:	Not known
Mutagenicity	:	Not known

Prolonged exposure can cause: nausea, headache and vomiting. Narcotic effect.



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12. ECOLOGICAL INFORMATION

Mobility	:	--
Persistence and degradability	:	--
Bioaccumulative potential	:	--
Ecotoxicity	:	--

13. DISPOSAL CONSIDERATIONS

Product:

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge of approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging:

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

Methods of disposal : --

14. TRANSPORT INFORMATION

UN Number	:	--
Proper shipping name	:	--
<u>Road/Railway/Inland waterways</u>		
ADR/RID/ADNR Class	:	non hazardous for road transport
<u>Sea</u>		
IMDG	:	non hazardous for sea transport
<u>Air</u>		
IATA Class	:	non hazardous for air transport
Packaging group	:	--
Packing instructions (PA)	:	--
Packing instructions (CAO)	:	--

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15. REGULATORY INFORMATION

Responsibility of the receiver to have knowledge of national and local regulations.

EC Classification

Label name : Irritant

Hazard symbol :



Risk phrases : 36/37/38: Irritating to eyes, respiratory system and skin
Safety phrases : 22: Do not breath dust
26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
36: Wear suitable protective clothing

National regulations

WGK (Germany) : --
Listed on TSCA-inventory : --
Listed on DSL-inventory : --
Listed on AICS-inventory : --
Listed on MITI-inventory : --

16. OTHER INFORMATION

All information given by or on behalf of Duchefa as to properties, specifications, use, etc. of the products is based on research, including literature and is believed reliable.

Duchefa is not liable for any damage a Customer might suffer as a result of the fact that the products the Customer bought from Duchefa prove not to be suitable for the use to which the Customer wishes to apply the products, unless the Customer has been expressly advised by Duchefa in writing in this regard.

Duchefa is not liable for damage caused by the actions or omissions of Customers themselves or by persons appointed by Customers or for whom Customers are otherwise responsible.

In this respect the buyer is obliged to check the quality and all other properties of the products. The buyer assumes all responsibilities connected with the use of the products and information.

Duchefa does not guarantee the manner of packaging, and/or the quality and/or the properties of the packaging of



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the goods unless Duchefa itself applied the packaging and/or had it applied and/or packed the goods itself and/or had them packed.

Communications by or on behalf of Duchefa on the quality, the composition, the handling (in the broadest sense of the word), application possibilities, properties and the like of the products supplied by Duchefa do not bind Duchefa unless these communications are made expressly, in the form of a written guarantee.

Furthermore the general terms and conditions of sale are applicable and upon request we will send the complete general terms and conditions of sale.

HISTORY

Printing date : **December 2nd, 2004**

Date previous MSDS : **January 07th, 2003**