

# SAFETY DATA SHEET

# spectrum®



Revision date 09-December-2022

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** THIOUREA, CRYSTAL, REAGENT, ACS

### Other means of identification

**Product Code(s)** T1040

**UN/ID no** UN2811

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** No information available

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

#### Supplier Address

Spectrum Chemical Mfg. Corp.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

### Emergency telephone number

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. Hazard(s) identification

### Classification

Acute toxicity - Oral	Category 3
Skin sensitization	Category 1A
Carcinogenicity	Category 2
Reproductive toxicity	Category 2

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

**Danger**

#### Hazard statements

Toxic if swallowed  
May cause an allergic skin reaction  
Suspected of causing cancer

Suspected of damaging fertility or the unborn child



**Appearance** Crystalline powder or Powder

**Physical state** Solid

**Odor** No information available

#### Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Contaminated work clothing must not be allowed out of the workplace

#### Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention  
Specific treatment (see .? on this label)  
IF ON SKIN: Wash with plenty of water and soap  
If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF SWALLOWED: Immediately call a POISON CENTER or doctor  
Rinse mouth

#### Precautionary Statements - Storage

Store locked up.

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

### 3. Composition/information on ingredients

#### Substance

Chemical name	CAS No	Weight-%
Thiourea	62-56-6	100

### 4. First-aid measures

#### Description of first aid measures

##### General advice

Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

##### Inhalation

Remove to fresh air.

##### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

**Skin contact** Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

## **5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Product is or contains a sensitizer. May cause sensitization by skin contact.

**Hazardous combustion products** Carbon dioxide (CO<sub>2</sub>). Hydrocarbons. Sulfur oxides.

**Explosion data**

**Sensitivity to mechanical impact** none.

**Sensitivity to static discharge** none.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## **7. Handling and storage**

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear

suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.

#### **Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

### **8. Exposure controls/personal protection**

#### **Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

#### **Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

#### **Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

### **9. Physical and chemical properties**

#### **Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	Crystalline powder or Powder
<b>Color</b>	Colorless to White
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	no data available	None known
<b>Melting point / freezing point</b>	175 °C / 347 °F	None known
<b>Boiling point / boiling range</b>	no data available	None known
<b>Flash point</b>	no data available	None known
<b>Evaporation rate</b>	no data available	None known
<b>Flammability (solid, gas)</b>	no data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	

<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	no data available	None known
<b>Relative density</b>	1.4	None known
<b>Water solubility</b>	Soluble in water	None known
<b>Solubility(ies)</b>	Soluble in polar organic solvents	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	no data available	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	no data available	None known
<b>Dynamic viscosity</b>	No data available	None known

#### Other information

<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. Stability and reactivity

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Incompatible materials</b>	Strong oxidizing agents, strong acids, and strong bases. Peroxides.
<b>Hazardous decomposition products</b>	None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### **Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause irritation. Prolonged contact may cause redness and irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Toxic if swallowed. (based on components).

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Itching. Rashes. Hives. May cause redness and tearing of the eyes.
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#### Acute toxicity

## Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Thiourea 62-56-6	= 125 mg/kg ( Rat ) = 1750 mg/kg ( Rat )	> 6810 mg/kg ( Rat )	> 0.9 mg/L ( Rat ) 4 h

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	May cause sensitization by skin contact.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Thiourea 62-56-6	-	Group 3 - Not classifiable - Monograph 79 [2001] Supplement 7 [1987]	-	-

### Legend

<b>Reproductive toxicity</b>	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. Suspected of damaging fertility or the unborn child.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

## 12. Ecological information

### Ecotoxicity Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Thiourea 62-56-6	EC50: 3.8 - 10mg/L (72h, Desmodesmus subspicatus) EC50: =6.8mg/L (96h, Desmodesmus subspicatus)	LC50: =10000mg/L (96h, Brachydanio rerio) LC50: >600mg/L (96h, Pimephales promelas)	-	EC50: =35mg/L (48h, Daphnia magna)

<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	Inherently biodegradable.

### Component Information

Chemical name	Partition coefficient
Thiourea 62-56-6	-0.92

<b>Other adverse effects</b>	No information available.
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## 13. Disposal considerations

### Waste treatment methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.

## 14. Transport information

### DOT

<b>UN/ID no</b>	UN2811
<b>Proper shipping name</b>	Toxic solids, organic, n.o.s.
<b>Hazard class</b>	6.1
<b>Special Provisions</b>	III
<b>Special Provisions</b>	IB8, IP3, T1, TP33
<b>Marine Pollutant Technical Name</b>	Thiourea, Thiourea
<b>Description</b>	UN2811, Toxic solids, organic, n.o.s. (Thiourea), 6.1, III, Marine pollutant (Thiourea, Thiourea)
<b>Emergency Response Guide Number</b>	154

### TDG

<b>UN/ID no.</b>	UN2811
<b>Proper shipping name</b>	Toxic solid, organic, n.o.s.
<b>Hazard class</b>	6.1
<b>Packing Group</b>	III
<b>Special Provisions</b>	16
<b>Marine Pollutant Technical Name</b>	Thiourea, Thiourea.
<b>Description</b>	UN2811, Toxic solid, organic, n.o.s. (Thiourea), 6.1, III

### MEX

<b>UN-No</b>	UN2811
<b>Proper Shipping Name</b>	Toxic solid, organic, n.o.s.
<b>Hazard class</b>	6.1
<b>Special Provisions</b>	223, 274
<b>Packing Group</b>	III
<b>Description</b>	UN2811, Toxic solid, organic, n.o.s. (Thiourea), 6.1, III

### ICAO (air)

<b>UN/ID no.</b>	UN2811
<b>Hazard class</b>	6.1
<b>Packing Group</b>	III
<b>Special Provisions</b>	A3, A5

### IATA

<b>UN number</b>	UN2811
<b>Hazard Class</b>	6.1
<b>Packing group</b>	III
<b>Emergency Response Guide Number</b>	6L
<b>Special Provisions</b>	A3, A5

### IMDG

<b>UN number</b>	UN2811
<b>Hazard Class</b>	6.1
<b>Packing group</b>	III
<b>EmS-No</b>	F-A, S-A
<b>Special Provisions</b>	223, 274
<b>Marine Pollutant</b>	P

### RID

<b>UN number</b>	UN2811
<b>Proper shipping name</b>	TOXIC SOLID, ORGANIC, N.O.S.

<b>Hazard Class</b>	6.1
<b>Packing group</b>	III
<b>Classification code</b>	T2
<b>Special Provisions</b>	274, 614
<b>Description</b>	UN2811, TOXIC SOLID, ORGANIC, N.O.S. (Thiourea), 6.1, III, ENVIRONMENTALLY HAZARDOUS
<b>Labels</b>	6.1

#### ADR

<b>UN number</b>	UN2811
<b>Proper shipping name</b>	Toxic solid, organic, n.o.s.
<b>Hazard Class</b>	6.1
<b>Packing group</b>	III
<b>Classification code</b>	T2
<b>Tunnel restriction code</b>	(E)
<b>Special Provisions</b>	274, 614
<b>Description</b>	UN2811, Toxic solid, organic, n.o.s. (Thiourea), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS
<b>Labels</b>	6.1

#### ADN

<b>UN/ID No</b>	UN2811
<b>Proper shipping name</b>	Toxic solid, organic, n.o.s.
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	III
<b>Classification code</b>	T2
<b>Special Provisions</b>	274, 614, 802
<b>Description</b>	UN2811, Toxic solid, organic, n.o.s. (Thiourea), 6.1, III, ENVIRONMENTALLY HAZARDOUS
<b>Hazard label(s)</b>	6.1
<b>Limited quantity (LQ)</b>	5 kg
<b>Equipment Requirements</b>	PP, EP

## 15. Regulatory information

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	This product complies with ENCS:
<b>IECSC</b>	This product complies with China:
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.



Chemical name	SARA 313 - Threshold Values %
Thiourea - 62-56-6	0.1

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Thiourea 62-56-6	10 lb final RQ 4.54 kg final RQ	-

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Thiourea - 62-56-6	carcinogen

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Thiourea 62-56-6	1853	Present	Environmental hazard Special hazardous substance

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

**NFPA**

**Health hazards** 2

**Flammability** 0

**Instability** 0

**Physical and chemical properties** -

**HMIS**

**Health hazards** 2 \*

**Flammability** 0

**Physical hazards** 0

**Personal protection** X

*Chronic Hazard Star Legend*

\* = Chronic Health Hazard

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date** 09-December-2022  
**Revision Note** No information available.

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**