

Safety Data Sheet

Thiourea

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Thiourea
Recommended Use: Science education applications
Synonyms: Thiocarbamide, isothiourea, 2-thiourea
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Toxic if swallowed. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

GHS Classification:

Respiratory Sensitisation Category 1, Skin Corrosion/Irritation Category 2, Carcinogenicity Category 2, Hazardous to the aquatic environment - Acute Category 2, Hazardous to the aquatic environment - Chronic Category 2, Acute Toxicity - Oral Category 3

Other Safety Precautions: IF exposed or concerned: Get medical advice/attention.

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Thiourea	62-56-6	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Avoid Dusting. May become explosive when dispersed in air. Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Sulfur Oxides, Carbon oxides, Nitrogen oxides

Section 6 Spill or Leak Procedures

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Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Evacuate the area promptly. Avoid prolonged or repeated contact with material. Avoid breathing material. Avoid contact with skin and eyes.

Reduce airborne dust and prevent scattering by moistening with water. Ventilate the area by opening door and/or turning on fans and blowers. Vacuum or sweep up material and place in a disposal container. Avoid runoff into storm sewers and ditches that lead to waterways. Contain the discharged material. Collect spillage.

Section 7 Handling and Storage

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection. Do not breathe dust/vapor. Do not get in eyes, on skin, or on clothing. Retained residue may make empty containers hazardous; use caution.

Storage: Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Blue - Toxic. Store separately in a secured area.

Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use. Respiratory protection may be required in addition to ventilation depending upon conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Nitrile

Section 9 Physical Data

Formula: CH ₄ N ₂ S	Vapor Pressure: N/A
Molecular Weight: 76.12 g/mol	Evaporation Rate (BuAc=1): N/A
Appearance: White Powder	Vapor Density (Air=1): 2.6
Odor: No data available	Specific Gravity: 1.41
Odor Threshold: No data available	Solubility in Water: Slightly Soluble
pH: 5.0 - 7 at 50 g/l at 20 °C	Log Pow (calculated): -0.92 at 20 °C
Melting Point: 177 C	Autoignition Temperature: No data available
Boiling Point: No data available	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: N/A N/A	Percent Volatile by Volume: 0%

Section 10 Reactivity Data

Reactivity: No data available

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

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Incompatible Materials: Caustics (bases), Strong acids, Strong oxidizing agents
Hazardous Decomposition Products: Nitrogen oxides, Carbon oxides, Sulfur Oxides
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry: Inhalation, ingestion, eye or skin contact.
Symptoms (Acute): , thyroid, Liver disorders, Blood disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Thiourea	62-56-6	Oral LD50 Rat 125 mg/kg	Not determined	Not determined

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Thiourea	62-56-6	Not listed	Listed	Listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: Evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Listed by NTP, IARC as causing cancer., Limited evidence of a carcinogenic effect.

Section 12 Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife. Keep out of waterways.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: Biodegrades slowly.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Thiourea	62-56-6	96 HR LC50 PIMEPHALES PROMELAS > 600 MG/L 96 HR LC50 BRACHYDANIO RERIO 10000 MG/L 48 HR EC50 DAPHNIA MAGNA 35 MG/L 96 HR EC50 DESMODESMUS SUBSPICATUS 6.8 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS 3.8 - 10 MG/L

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:	Air - IATA Proper Shipping Name:
UN2811, Poisonous Solids, n.o.s. (Thiourea), 6.1, III Labels: 6 Harmful - Stow away from food stuffs	UN2811, Poisonous Solids, n.o.s. (Thiourea), 6.1, III Labels: 6 Harmful - Stow away from food stuffs

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

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Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Thiourea	62-56-6	Thiourea	No	10 lb final RQ; 4.54 kg final RQ	No	No

California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16

Additional Information

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health