



Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)  
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)  
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)  
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## THIOUREA

### 1. Product Identification

Synonyms: Thiocarbamide; 2-Thiourea; Pseudothiourea; Isothiourea

CAS No.: 62-56-6

Molecular Weight: 76.12

Chemical Formula:  $(\text{NH}_2)_2\text{CS}$

Product Codes: 33426, 39144

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Thiourea	62-56-6	99 - 100%

### 3. Hazards Identification

Potential Health Effects

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion: Harmful if swallowed. May affect bone marrow and consequently white blood cell, red blood cell, and platelet counts.

Skin Contact: Causes irritation, redness and pain. May also cause allergic skin eruptions. Sunlight may aggravate skin allergy.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: Chronic exposure can cause liver damage and goiter. Material is a possible human carcinogen.

Aggravation of Pre-existing Conditions: Persons with pre existing skin disorders may be more susceptible to these substances.

### 4. First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire Fighting Measures

Fire: As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Explosion: Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.



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Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

#### 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

#### 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from oxidizing materials. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas.

#### 8. Exposure Controls/Personal Protection

Airborne Exposure Limits: None established.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

#### 9. Physical and Chemical Properties

Appearance: White crystals.

Odor: Odorless.

Solubility: Soluble in 11 parts water.

Density: 1.41

pH: No information found.

Volatiles by volume @ 21C (70F): 0

Boiling Point: 150 - 160C (302 - 320F) Sublimes in vacuum

Melting Point: 175 - 177C (347 - 351F)

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

#### 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: May emit oxides of carbon, sulfur and nitrogen when heated to decomposition.

The information contained herein is in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. We do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.



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Hazardous Polymerization: May occur when in contact with acrylaldehyde.

Incompatibilities: Acrolein, acrylaldehyde, hydrogen peroxide, nitric acid, and oxidizing agents.

Conditions to Avoid: Incompatibles.

#### 11. Toxicological Information

Oral rat LD50: 125 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Thiourea (62-56-6)	No	Yes	3

#### 12. Ecological Information

Environmental Fate: When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material may leach into groundwater. When released into water, this material is not expected to biodegrade. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

Environmental Toxicity: Toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment.

#### 13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

Land

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Proper Shipping Name: THIOUREA

Hazard Class: 6.1

UN/NA: UN2811

Packing Group: III

Information reported for product/size: 12KG

International (Water, I.M.O.)

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Proper Shipping Name: THIOUREA

Hazard Class: 6.1

UN/NA: UN2811

Packing Group: III

Information reported for product/size: 12KG

International (Air, I.C.A.O.)

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Proper Shipping Name: THIOUREA

Hazard Class: 6.1

UN/NA: UN2811

Packing Group: III

Information reported for product/size: 12KG

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#### 15. Regulatory Information

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No

Reactivity: No (Pure / Solid)

#### 16. Other Information

Product Use:

Laboratory Reagent.