

# Material Safety Data Sheet (MSDS / SDS)

## Thiourea - Technical Grade

### SECTION 1: Identification

|                                |                                                                                                        |
|--------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Product Name</b>            | Thiourea                                                                                               |
| <b>Synonyms</b>                | Thiourea, Thiocarbamide, Sulfourea                                                                     |
| <b>CAS No.</b>                 | 62-56-6                                                                                                |
| <b>Recommended Use</b>         | Gold/silver ore flotation and leaching aid; rubber vulcanisation accelerator; metal plating brightener |
| <b>Manufacturer / Supplier</b> | Ochnology Solution Pvt. Ltd., B-153, Sector-4 Defence Colony, Dehradun, Uttarakhand, India - 248001    |
| <b>Telephone</b>               | +91 9286823642/43                                                                                      |
| <b>Email</b>                   | projects@ochnology.com, bd@ochnology.com                                                               |

### SECTION 2: Hazard(s) Identification

**GHS Classification: Carcinogenicity Category 2 (H351); Specific Target Organ Toxicity - Repeated Exposure Category 2 (H373, thyroid); Aquatic Chronic Category 2 (H411)**

**Signal Word: Warning**

**Hazard Statements:**

- H351 - Suspected of causing cancer
- H373 - May cause damage to organs (thyroid) through prolonged or repeated exposure
- H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements:**

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P260 - Do not breathe dust
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product

- P271 – Use only outdoors or in a well-ventilated area
- P273 – Avoid release to the environment
- P280 – Wear protective gloves/eye protection
- P308+P313 – IF exposed or concerned: Get medical advice/attention

### SECTION 3: Composition / Information on Ingredients

| Component           | CAS No. | Concentration (w/w) |
|---------------------|---------|---------------------|
| Thiourea            | 62-56-6 | Min. 99.0%          |
| Moisture (residual) | –       | < 0.3%              |

### SECTION 4: First-Aid Measures

|                     |                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | Rinse with plenty of water for several minutes. Remove contact lenses if present. Seek medical attention if irritation persists. |
| <b>Skin Contact</b> | Wash with soap and water. Seek medical attention if irritation persists.                                                         |
| <b>Inhalation</b>   | Move to fresh air. If coughing or respiratory discomfort persists, seek medical attention.                                       |
| <b>Ingestion</b>    | Rinse mouth with water. Do NOT induce vomiting. Seek medical attention if a large quantity is ingested or discomfort occurs.     |

### SECTION 5: Fire-Fighting Measures

- Combustible organic solid – can burn if exposed to a strong ignition source
- Suitable extinguishing media: water spray/fog, foam, CO<sub>2</sub>, dry chemical
- Combustion may release oxides of sulphur and nitrogen – fire-fighters should wear SCBA

### SECTION 6: Accidental Release Measures

- Avoid generating dust during clean-up; use wet suppression or vacuum where practical
- Sweep or vacuum into suitable containers for disposal as hazardous waste
- Prevent entry into drains, sewers or waterways – toxic to aquatic life
- Wear appropriate PPE (dust mask, gloves, goggles) during clean-up

## SECTION 7: Handling and Storage

- Avoid generating and inhaling dust; use local exhaust ventilation
- Avoid skin/eye contact; wash hands after handling and before eating, drinking or smoking
- Store in a cool, dry, well-ventilated area away from direct sunlight, physically segregated from food and feed
- Keep containers tightly sealed and clearly labelled

## SECTION 8: Exposure Controls / Personal Protection

|                                     |                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Occupational Exposure Limits</b> | No universally harmonised specific OEL established for thiourea; handle per good industrial hygiene practice given its carcinogenicity suspicion and thyroid-effect classification |
| <b>Engineering Controls</b>         | Local exhaust ventilation at dust-generating process steps                                                                                                                         |
| <b>Eye/Face Protection</b>          | Safety glasses or goggles recommended                                                                                                                                              |
| <b>Hand Protection</b>              | Chemical-resistant gloves recommended                                                                                                                                              |
| <b>Respiratory Protection</b>       | Dust mask (N95 or equivalent) recommended in dusty conditions; higher protection recommended for prolonged or high-concentration exposure                                          |

## SECTION 9: Physical and Chemical Properties

| Property      | Unit | Value                    |
|---------------|------|--------------------------|
| Appearance    | –    | White crystalline powder |
| Odour         | –    | Odourless                |
| Melting Point | °C   | 176 – 178                |

| Property            | Unit | Value                              |
|---------------------|------|------------------------------------|
|                     |      |                                    |
| Solubility in Water | –    | Soluble                            |
| Flash Point         | –    | Not applicable (combustible solid) |

## SECTION 10: Stability and Reactivity

- Stable under normal conditions of storage, handling and use
- Incompatible materials: strong oxidising agents, strong acids
- Hazardous decomposition products (combustion): oxides of sulphur and nitrogen

## SECTION 11: Toxicological Information

- Suspected of causing cancer (H351) based on animal study data reviewed by regulatory bodies
- Documented antithyroid (goitrogenic) activity – may cause thyroid organ damage through prolonged or repeated exposure (H373)
- Low acute oral toxicity, but the chronic/carcinogenicity and thyroid-effect classifications warrant conservative handling practices

## SECTION 12: Ecological Information

- Toxic to aquatic life with long lasting effects (H411)
- Avoid release to waterways under all circumstances
- Confirm current biodegradability/persistence data for specific regulatory submissions

## SECTION 13: Disposal Considerations

- Dispose of strictly in accordance with local, state and national hazardous waste regulations given the carcinogenicity suspicion
- Do not discharge to drains, waterways or soil
- Use a licensed hazardous waste contractor for disposal

## SECTION 14: Transport Information

|                               |                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------|
| <b>UN Number</b>              | Not applicable – not classified as Dangerous Goods for transport under standard criteria          |
| <b>Proper Shipping Name</b>   | Not regulated for transport (IMDG / ADR / IATA / RID)                                             |
| <b>Transport Hazard Class</b> | Not classified                                                                                    |
| <b>Packing Group</b>          | Not applicable                                                                                    |
| <b>Environmental Hazards</b>  | Marine Pollutant consideration – toxic to aquatic life; confirm current IMDG marking requirements |

## SECTION 15: Regulatory Information

- Widely listed on major chemical inventories (TSCA, REACH, ECL, etc.); subject to hazard classification and labelling requirements given its carcinogenicity suspicion and thyroid-toxicity data in several jurisdictions
- Buyers/importers should confirm current labelling, workplace exposure and environmental release requirements applicable to their specific jurisdiction and end-use

## SECTION 16: Other Information

### Revision Date: 19 July 2026

This SDS has been compiled based on general industry data and knowledge for Thiourea products of this type as commercially supplied. Thiourea carries genuine, well-documented carcinogenicity-suspicion and thyroid-toxicity concerns – this document is intended as a general handling and safety guide only and does not replace a batch-specific SDS from the manufacturing mill or a professional occupational health and regulatory compliance review.

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