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上虞洁华化工有限公司
Shangyu Jiehua Chemical Co., Ltd.

MATERIAL SAFETY DATA SHEET 物质安全数据单

Thiourea Peroxide

1. Chemical Product and Supplier Identification

Product Name

- Thiourea Dioxide

Synonyms

- Formamidine sulfinic acid, FAS, TDO

Manufacturer

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- Hangzhou Gulf Fine Chemical Zone, Shangyu, Zhejiang 312369, China
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MSDS Number

- JHTDO-01-01

Effective Date

- January 1, 2003

2. Composition/Information on Ingredients

Ingredients	Chemical Formula	CAS No.	Percentage
Thiourea Dioxide	CH4N2O2S	1758-73-2	Min.99.0

3. Hazards Identification

Potential Health Effects

- Inhalation……. Irritating to the respiratory tract. Can produce delayed pulmonary edema.
- Eye contact…….. May cause irritation to the eyes; May cause chemical conjunctivitis.
- Skin contact……. May cause skin irritation.
- Ingestion…….. Irritation of the mouth and throat with nausea and vomiting.

4. First-aid Measures

- Inhalation…….. Remove affected person to fresh air. Seek medical attention if effects persist.
- Eye contact…….. Flush eyes with running water for at least 15 minutes with eyelids held open. Seek specialist advice.
- Skin contact…….. Wash affected skin with soap and mild detergent and large amounts of water.
- Ingestion…….. If the person is conscious and not convulsing, give 2-4 cupfuls of water to dilute the chemical and seek medical attention immediately. Do not inducing vomiting.

5. Fire Fighting Measure

Flash Point

- Not applicable

Flammability

- Not applicable

Ignition Temperature

- Not applicable

Danger of Explosion

- Non-explosive

Extinguishing Media

- Water

Fire Hazards

- Not combustible. If involved in a fire, can decompose generating sulphur dioxide, ammonia, and sulfinic acid. Incompatible with oxidizing agents, water and heavy metals. Material is shock sensitive and potentially explosive. Hazardous decomposition products include carbon dioxide and probably carbon monoxide. Oxides of nitrogen and sulphur may also be present. Hazardous polymerization will not occur.

Fire-Fighting Measures

- Evacuate all non-essential personnel
- Wear protective clothing and self-contained breathing apparatus
- Remain upwind of fire to avoid hazardous vapors and decomposition products
- Use water spray to cool fire-exposed containers

6. Accidental Release Measures

Spill Clean-up Procedures

- Eliminate all sources of ignition. Evacuate unprotected personnel from equipment recommendations found in Section 8. Never exceed any occupational exposure limit.
- Shovel or sweep material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to inventory.
- Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.
- Do not touch or walk through spilled material. Keep away from combustibles (wood, paper, oils, etc.). Do not return any product to container because of the risk of contamination.

7. Handling and Storage

Storage

- Store in a cool (below 30 °C), dry, well ventilated area away from all source of ignition and out of direct sunlight.
- Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Never return unused product to storage container.
- Protect from moisture. Do not store near combustible materials. Keep containers well sealed, seal only with original vent cap. Ensure pressure relief and adequate ventilation.

- Store separately from organics and reducing materials. Avoid contamination which may lead to decomposition.

Handling

- Avoid contact with eyes, skin, and clothing. Use with adequate ventilation.
- Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area.
- Prevent contact with combustible or organic materials.
- Label containers and keep them tightly closed when not in use.
- Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Engineering Controls

- General room ventilation is required. Local exhaust ventilation, process enclosures or other engineers controls may be needed to maintain airborne levels below recommended exposure limits. Avoid creating dust or mist. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Respiratory Protection

- For many conditions, no respiratory protection may be needed; however, in dusty or unknown atmospheres or when exposures exceed limit values, wear a NIOSH approved respirator.

Eye/Face Protection

- Wear chemical safety goggles and a full face shield while handling this product.

Skin Protection

- Prevent contact with this product. Wear gloves and protective clothing depending on condition of use.

Other Protective Equipment

- Eye-wash station
- Safety shower
- Impervious clothing
- Rubber boots

General Hygiene Considerations

- Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

9. Physical and Chemical Properties

Appearance:	White crystalline powder
Odor:	None
Solubility:	30g/L @ 20°C
Decomposition Temperature:	123 °C

10. Stability and Reactivity

Stability

- Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid

- Water
- Excessive heat
- Strong alkalies
- Strong oxidizing agents

Hazardous Decomposition Products

- Ammonia, Sulfur dioxide

11. Toxicological Information

- No specific data

12. Ecological Information

- No specific data

13. Disposal Considerations

Waste Treatment

- Dispose of in an approved waste facility operated by an authorized contractor in compliance with local regulations.

Package Treatment

- The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

14. Transport Information

- Proper Shipping Name: Thiourea Dioxide
- UN Number: UN3341
- Hazard Class: 4.2
- Labels: 4.2 (Flammable Solid)
- Packing Group: III

15. Regulatory Information

SARA Section…….……..	Yes
SARA (313) Chemicals…….	No
EPA TSCA Inventory…….	No
Canadian WHMIS Classification…..	C, D2B
Canadian DSL……..	Appears
EINECS Inventory…….	Appears

16. Other Information

Disclaimer

- The data in this Material Safety Data Sheet is believed to be correct. However, since conditions of use are outside our control it should not taken as a warranty of representation for which Shangyu Jiehua Chemical Co., Ltd. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.