



## Thiourea Dioxide

### I. Description of the Product

**Thiourea Dioxide** (TDO or TUD) is also named as Formamidine Sulfinic Acid. Its appearance is white crystal powder. Thiourea Dioxide is a stable compound with no strong reducing and oxidizing ability, and its dissolvability is 26.7g/l (20 °C), while its PH is 5.0 in saturated solution. TDO appears terrific stable even in 20° C -30° C solution, but when it is under heat or catalysing by alkali, it decomposes gradually to produce sulfoxylic acid through formamidine sulfinic acid to exhibit a reducing action.

### II. Applications of the Product

TDO is a new kind of reducing agent that used as exchange of sodium hydrosulfite. It is widely used in textile and paper making industry. This product is also used in leather processing industry, paper, pulp and board industry, photographic industry, bleaching and reducing agents. This product is also a component of decolorisation agents. In macromolecule material industry, it is used as catalysis agent and stabilizer of resinic producing, and it is also used in organic synthesization of sensitizing material, and medicine, medical, spicery materials in fine chemicals, and also can be applied in the recycling and separating of heavy metals.

### III. Quality Terms

| Physical & Chemical Features |  |
|------------------------------|--|
| Name                         | Thiourea Dioxide                                 |
| Byname                       | Formamidine Sulfinic Acid                        |
| Appearance & Odor            | White Crystal, odorless                          |
| Molecular Formula            | (NH <sub>2</sub> ) <sub>2</sub> CSO <sub>2</sub> |
| Molecular Weight             | 108.12   |
| Melting Point                | 126°C  |
| PH                           | 4 (1% Solution)                                  |
| CAS NO.                      | 1758-73-2 or 4189-44-0                           |
| Dangerous Goods Class        | 4.2  |
| Specific Gravity             | 1.68   |
| Specifications               |  |
| Purity (%)                   | ≥99%   |
| Thiourea (%)                 | ≤0.1%  |





|                                 |  |
|---------------------------------|--|
| Moisture (%)                    | ≤0.05%                                   |
| Iron (Fe) (%)                   | ≤10PPM                                   |
| Sulphate (%)                    | ≤0.17%                                   |
| <b>Packing</b>                  |  |
| 500kg and 1000kg container bags | 25kg or 50kg plastic bags                |
| 100kg or 160kg drums            | 25kg kraft paper compound plastic bags   |
| 50kg fiber drums                | Packing according to the buyer's request |

#### IV. Storage Points for Attention

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. 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.

#### V. Usage Points for Attention

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.

#### VI. First-aid Measures

- ♀ Inhalation- Remove affected person to fresh air. Do not use mouth-to mouth resuscitation. 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- Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen.
- ♀ Do not use mouth-to-mouth resuscitation. Seek medical service immediately.

#### VII. Shipping Information

- ♀ Proper Shipping Name: Thiourea Dioxide
- ♀ UN Number: UN3341





**Henan Hongye Chemical Co., Ltd.**

**PRODUCT INFORMATION SHEET™**

The world leading professional manufacturer and exporter of Thiourea Dioxide and bleaching agent FAS !

♀ Hazard Class: 4.2

♀ Labels: 4.2(Flammable Solid)

♀ Packing Group: II

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■ Please read the **MSDS** for this chemical before using!

