



Thiourea

I. Description of the Product

Thiourea (also called Thiocarbamide or Sulfourea) is the diamide of thiocarbonic acid that resembles urea but contains sulfur instead of oxygen. Thiourea is the main raw material of producing thiourea dioxide, which presents a white sheen slice, pillar or needle form shining crystallize body. It can dissolve in cold water, ammonium sulphur prussic acid and alcohol, also easily dissolves in hot water, but hardly dissolves in aether.

II. Applications of the Product

Thiourea is a fine chemicals product with high additive value, which is widely applied in various industries such as medicine, agriculture, textile, printing-dyeing, chemical, metal-mine-selecting, laundering etc.

It mainly uses in pharmaceutical raw material, bleaching agent in textile dyeing and printing, auxiliary of dyeing and anti-oxidant, and it can be used as rubber accelerator, floating agent, photo developing agent, prexide thiourea, cold wave etc. It is also used in resin compression molding powder electroplatin blue printing and boiler washing. 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

| | | | |
|-----------------------------------|--|-------------|---|
| Byname | Thiocarbamide | Feature | White crystal powder, bitter-taste, combustible |
| Molecular Formula | (NH ₂) ₂ CS or CH ₄ N ₂ S | Gravity | 1.406 |
| Molecular Weight | 76.12 | | |
| Technical Index （ HG/T3266-1988 ） | | | |
| Terms | Top Class | First Class | |
| Purity （%） | ≥ 99.0 | ≥ 98.50 | |
| Loss after heated （%） | ≤ 0.40 | ≤ 0.50 | |
| Ash content （%） | ≤ 0.10 | ≤ 0.15 | |
| Insoluble in water （%） | ≤ 0.02 | ≤ 0.05 | |
| CNS (CNS)% | ≤ 0.02 | ≤ 0.05 | |
| Melting Piont （℃） | ≥171 | ≥170 | |
| Packing | 25kg woven bag with inner film or according to the clients | | |



IV. Storage Points for Attention

Store in a cool, 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. Do not store near combustible materials. Keep containers well sealed, seal only with original vent cap. It is not suitable for mass and long-time storage and should be equipped with relevant quantity and sorts fire-protecting equipment, and there should be the equipment of emergency and take-in material.

V. Usage Points for Attention

Operation in obturation, and provide thoroughly wind-ventilating in part area. This product operator should be trained specially, strictly act to the operating regulations, and wear the self-sifting gas mask, and chemical-proof glasses, and also should wear poison-proof suits, and rubber gloves. Keep away from fire, heat, and no smoking in the working place. Use explode-defense ventilation system and equipment. Prevent the gas leaking out into the air of working place. Keep away from the acid species. Gentle load and laid-down to avoid damage of the packing or container. Equip with relevant quantity and sorts fire-protecting equipment, and there should be the equipment of emergency. There still be poisoned remains even in emptied container.

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
- ♀ Dangerous Goods Code:2811
- ♀ Packing Group:II
- ♀ Packing means:plastic bags or kraft paper bag with two layers in full-placket outside or semi-placket steel bucket; plastic bags or two layers kraft paper bag outside of common





wood case; screw-mouth glass bottle, iron-lid glass bottle, plastic bottle or metal drum outside of common wood case; screw-mouth glass bottle, plastic bottle, tinning-thin-steel bucket out with full-motherboard checkered case, fiberboard case or veneer board case.

♀ Note for transportation: Make sure the packaging or container is integrated and well sealed before transportation; make sure the container or case avoid from leaking, collapsing, falling or shattering in the process of transportation. Strictly prohibit from muddling along with acid, oxidant, foodstuff and additive. There should be relevant sorts and quantities of fire-protecting and leakage emergency equipment matched with the transit vehicles. Prohibit from insulating, drenching, high-temperaturing. When transport in the highroad, should take the regulated route.

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

