

Material Safety Data Sheet(MSDS/CSDS/SDS)

	Version No.:V.03	Prepared date: April 08,2006
Revised Date: February 08,2009	Effective Date:February 10,2009	Page: 1/5

THIOUREA

SECTION ONE PRODUCT & COMPANY IDENTIFICATION	
Product name:	Thiourea
Synonyms:	THIOCARBAMIDE ; ISOTHIOUREA THIOCARBONIC ACID DIAMIDE ; 2-THIOUREA
Formula:	$(NH_2)_2 \cdot CS = CH_4N_2S$
Molecular Weight:	76.12
Properties:	White or light yellow crystalline, bitter taste, soluble in cold water and alcohol.
CAS No.:	62-56-6
UN NO.:	3077
HAZARDOUS CLASS:	9
EINECS No.:	200-543-5
H.S.Code:	29309090
<i>Supplier' Name, Address, Tel. No., Fax No. and E-mail are as per the top line of this page.</i>	

SECTION TWO COMPOSITION/INFORMATION ON INGREDIENTS			
SUBSTANCE <input checked="" type="checkbox"/>	PREPARATION <input type="checkbox"/>		
INGREDIENTS	CAS NUMBER	%(BY WEIGHT)	CLASSIFICATION
Thiourea	62-56-6	>99 $(NH_2)_2 \cdot CS = CH_4N_2S$	9 RISK CLASS As per CHINA GB12268-2005

SECTION THREE HAZARD IDENTIFICATION	
OVERVIEW: HARMFUL; DANGEROUS FOR THE ENVIRONMENT	
Potential Acute Health Effects:	
Eye:	Causes irritation,redness, and pain.
Skin:	Causes irritation, redness and pain. May also cause allergic skin eruptions. Sunlight may aggravate skin allergy.
Ingestion:	Harmful if swallow. May affect bone marrow and consequently white blood cell, red blood cell, and platelet counts.
Inhalation:	May cause irritation to the respiratory tract. Symptoms may include coughing, shortness of breath;

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SECTION FOUR FIRST-AID MEASURES

- EYES:** Flush eyes with plenty of water for at least 15 minutes. Seek medical attention if symptoms persist.
- SKIN:** Flush skin with plenty of water for at least 15 minutes. Seek medical attention if symptoms persist. Wash clothing before reuse; Thoroughly clean shoes before reuse.
- INGESTION:** Rinse out mouth and drink lots of water. In case of unusual symptoms,seek medical attention and show physician the container details.
- INHALATION:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.Seek medical attention immediately.

SECTION FIVE FIRE-FIGHTING MEASURES

- EXTINGUISHING MEDIA:** Use any means suitable for extinguishing surrounding fire.
- HAZARDS:** This product is non-flammable;
- PROTECTION:** Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

SECTION SIX ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS:** Wear protective equipment to prevent skin and eye contamination and inhalation of dust. Cover with sand, dry lime or soda ash and place in a closed container for disposal.Flush spill area with water.
- DISPOSAL METHODS:** Dispose of in accordance with all local or state regulations at an approved waste disposal facility.
- ENVIRONMENTAL PRECAUTIONS:**Prevent entry into sewers or streams and other water bodies;

SECTION SEVEN HANDLING AND STORAGE *n*

- HANDLING:** Workers should wear protective clothing to keep all skin covered during handling. Protect from moisture. Avoid contact with incompatibles such as strong oxidizing agents. Operations should be carried out in an efficient fume hood or equivalent system.
- STORAGE:** Keep in a tightly closed container. Protect from physical damage.
- PRECAUTIONS:** Please pay attention to SECTION 10 CONDITIONS TO AVOID and MATERIAL TO A VOID.

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SECTION EIGHT EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS: No exposure limit has been established for this product by Worksafe however the following exists for nuisance dusts : TWA 10 mg/m³.

ENGINEERING CONTROLS: Ensure adequate ventilation to maintain airborne concentrations to a minimum, including the use of local and/or general exhaust ventilation.

EYE & HAND PROTECTION: Wear safety spectacles or goggles for eye;

SKIN & BODY PROTETION: Wear rubber gloves and protective clothing.

RESPIRATORY PROTETION:Wear an appropriate respirator when dusty conditons prevail.

HYGIENE PRECAUTIONS: No smoking,eating and drinking water at workplace. Wash hands and face thoroughly after handling and before work breaks, eating, drinking,smoking and using toilet facilities.

SECTION NINE PHYSICAL AND CHEMICAL PROPERTIES

Appearance : White powder or crystals, odorless

Formula : $(\text{NH}_2)_2 \cdot \text{CS}=\text{CH}_4\text{N}_2\text{S}$ **Boiling Point :** Decomposes before reaching boiling point.

Melting Point : 170 - 172 deg C **Vapour Pressure :** N/A

Specific Gravity : 1.41 @20Deg C **Flash Point :** N/A

Solubility in water : Soluble in 11 parts water

SECTION TEN STABILITY AND REACTIVITY INFORMATION

CHEMICAL STABILITY: Stable under normal temperatures and pressures.

INCOMPATIBILITY (MATERIALS TO AVOID):Strong oxidizing agents and strong acids.

CONDITIONS TO AVOID: High temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, carbon dioxide, oxides of nitrogen and sulfur.

HAZARDOUS POLYMERIZATION: Will not accur.

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SECTION ELEVEN TOXICOLOGICAL INFORMATION

Toxicity Data: Oral LD50 = 125 mg/kg (Rat) Dermal LD50 = >2800 mg/kg (Rabbit) Inhalation LC50 = >170 mg/m³/4hr (Rat) Carcinogenicity : Category 2 Carcinogen - probable human carcinogen. Thiourea has been observed to cause tumours in the liver, lungs, ears, skin and thyroid of rats. Morphological transformations have been observed in rat and hamster embryos exposed to thiourea. Developmental abnormalities of the musculoskeletal and central nervous system were observed in rats administered thiourea orally 12 days after conception. The rate of post-implantation increased in rats administered thiourea orally 12 days after conception. RTECS reports DNA inhibition studies in human fibroblasts, lymphocytes and Hela cells. Unscheduled DNA synthesis and DNA damage studies have also been reported

Acute Swallowed Harmful if swallowed.

Eye May cause eye irritation.

Skin Harmful if in contact with skin.

Inhaled Harmful by inhalation.

SECTION TWELVE ECOLOGICAL INFORMATION

Ecotoxicity :	No Data
Persistence and degradability :	No Data
Mobility :	No Data
Additional information	
Environmental fate (exposure)	No Data
Bioaccumulative potential :	No Data

SECTION THIRTEEN DISPOSAL CONSIDERATIONS

METHODS OF DISPOSAL: Dispose of in according to all applicable governments' regulations;
CONTAMINATED PACKAGING: Empty packaging should be recycled or disposed of through an approved waste management facility.

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SECTION FOURTEEN TRANSPORT INFORMATION

PROPER SHIPPING NAME:	TOXIC SOLID, ORGANIC, N.O.S (THIOUREA)
UN NO.:	3077
HAZARD CLASS(IMDG):	9
PACKING GROUP:	III;

SECTION FIFTEEN REGULATORY INFORMATION

China: 9 risk class as per CHINA GB12268-2005

International: Please pay attention to any applicable national regulations as to the hazard and safety information of this product.

SECTION SIXTEEN OTHER INFORMATION

N/A

Disclaimer:

The information(from section one to section sixteen) contained herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty is expressed or implied regarding the completeness or accuracy of this information, whether originating from from an alternate source. Users of this material should satisfy themselves by independent investigation of current scientific and medical information that this material may be safely handled.

ISO9001:2008 Through SGS & UKAS
And FAMI-QS Through BV CERTIFIED



This product has also been
pre-registered as per "REACH".