

SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

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SECTION 1 Identification of the substance

Product identifiers

Product name: Thiourea

CAS-No.: 62-56-6

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

Details of the supplier of the safety data sheet

Company: CHEMLYTE SOLUTIONS CO., LTD

Address: A1-3-830, XiXi Center, No. 588, Wenyi West Road, Hangzhou 310000,
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Emergency telephone number

Emergency Phone # : +1-703-527-3887

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute toxicity, oral Category 4

Hazardous to the aquatic environment, long-term hazard Category 2

Reproductive toxicity Category 2

Hazardous to the aquatic environment, long-term hazard Category 2

GHS Label elements, including precautionary statements:

Symbol:



Signal word: Warning

Hazard statement(s): Harmful if swallowed. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention:

Wash skins thoroughly after handling. Do not eat, drink or smoke when using this product. Obtain, read and follow all safety instructions before use. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. Avoid release to the environment.

Response:

If swallowed: Get medical help. Rinse mouth. If exposed or concerned, Get medical advice. Collect spillage.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification:/

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Thiourea

CAS No.: 62-56-6

Concentration: 99.3%

Section 4 FIRSTAID MEASURES

Description of necessary first aid measures

If inhaled: Quickly leave and move to a place with fresh air. Keep the airway unobstructed. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration immediately. Consult a physician.

In case of skin contact: Remove contaminated clothing and rinse with plenty of running water.

In case of eye contact: Rinse thoroughly with plenty of running water for at least 15 minutes and consult a physician.

If ingestion: Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed:/

Indication of immediate medical attention and special treatment needed, if necessary:/

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Use foam, dry powder, water spray, etc.

Special hazards arising from the chemical: This material is combustible. It may decompose and burn at high temperature and fire and release toxic fumes.

Special protective actions for fire-fighters: Firefighters must wear air breathing apparatus, fire-fighting suits and protective gloves to extinguish in the upwind direction.

Whenever possible, remove the container from the fire to open space and use spray water to cool unopened containers.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: It is recommended that emergency personnel wear protective masks and fire protective overalls. Do not touch the spill directly.

Environmental precautions: Isolate contaminated areas and restrict access.

Methods and materials for containment and cleaning op: Small amount of leakage: Avoid dusting, use a clean shovel to collect in a dry, clean, covered container and transfer to a safe place. Do not allow products to enter restricted areas such as sewers. A large amount of

leakage: Cover with plastic sheeting and canvas. Use a non-sparking tool to collect the waste or transport it to a waste disposal site for disposal.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear protective masks, normal protective clothing and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated warehouse. Keep away from fire and heat. Protect from direct sunlight. The package should be sealed and not exposed to moisture. It should be stored separately from oxidants, acids, acrolein, flammable materials, etc., and should not be mixed. The storage area should be provided with suitable materials to contain spills.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
thiourea	0.38 mg/m ³	4.1 mg/m ³	25 mg/m ³

Appropriate engineering controls: Close strictly and provide sufficient local exhaust.

Individual protection measures

Eye/face protection: Wear a protective mask.

Respiratory protection: A dust mask (full face mask) must be worn when exposed to dust.

Skin protection: Wear normal protective clothing. Air respirators should be worn during emergency rescue or evacuation.

Thermal hazards: /

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Crystal particle.

Colour: White.

Odour: /

Melting point/freezing point: 182°C.

Boiling point or initial boiling point and boiling range: /

Flammability: /

Lower and upper explosion limit/flammability limit: /

Flash point: /

Auto-ignition temperature: /

Decomposition temperature: /

pH: /

Kinematic viscosity: /

Solubility Miscible: /

Partition coefficient: n-octanol/water (log value): /

Vapour pressure: /

Density and/or relative density: 1.41.

Relative vapour density: /

Particle characteristics: /

Section 10 STABILITY AND REACTIVITY

Reactivity:/

Chemical stability: The material is stable in normal temperature,

Possibility of hazardous reactions: Decomposes on heating. This produces toxic fumes of nitrogen oxides and sulfur oxides. Reacts violently with acrolein, strong acids and strong oxidants.

Conditions to avoid: Spark, high temperature and static electricity.

Incompatible materials: Oxidizers, acids, acrolein and flammable materials.

Hazardous decomposition products: Oxycarbides, nitrogen oxides and sulfur oxides.

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Ingestion (swallowing), skin/eye exposure and inhalation.

Symptoms related to the physical, chemical and toxicological characteristics:/

Acute health effects:

Ingestion can cause symptoms such as nausea, vomiting and abdominal pain.

Skin contact can cause redness and irritation.

Inhalation can cause cough and throat irritation.

Eyes contact can cause redness and irritation.

Chronic health effects: Repeated or prolonged contact may cause skin sensitization. The substance may have effects on the thyroid. This substance is possibly carcinogenic to humans.

Numerical measures of toxicity (such as acute toxicity estimates):

LD50(oral, rat): 1750 mg/kg

LD50(dermal, rat): >2800 mg/kg

Section 12 ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial, where available):

Endpoint	Test Duration (hr)	Species	Value
BCF	1008h	Fish	<0.2
EC50	48h	Crustacea	35mg/l
EC50	96h	Algae or other aquatic plants	>=3.8<-5.4mg/l
NOEC(ECx)	504h	Crustacea	0.1mg/l
EC50	72h	Algae or other aquatic plants	3.8- 10mg/l
LC50	96h	Fish	>100mg/l

Persistence and degradability: Low.

Bioaccumulative potential: Low (BCF=2).

Mobility in soil: Medium (KOC=2.782).

Other adverse effects:/

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

Section 14 TRANSPORT INFORMATION

UN number: 3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID,N.O.S.

Transport hazard class(es):9.

Packing group,if applicable: II.

Environmental hazards: Marine pollutant.

Special precautions for user: /

Transport in bulk according to IMO instruments: /

Section 15 REGULATORY INFORMATION

Regulations:This safety data sheet is in compliance with the following national standards:GB/T 191-2008,GB 12268-2012,GB/T 15098-2008,GBZ 2.1-2019, GBZ 2.2-2007 as well as the following 16483-2008,GB 13690-2009,GB 18218-2018,GB 15258-2009,GB 6944-2012,GB 190-2009,GB/T regulations:Railway Dangerous Goods Transport Administrative Regulation,Dangerous Chemicals Safety Administrative Regulation.

SECTION 16 Other information

Further information

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