



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT CODE** H0066  
**PRODUCT NAME** 4,5-DIMETHYL THIAZOLE  
**SUPPLIER** Shanghai M & U International Trade Co., Ltd.  
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**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

### 2. HAZARD IDENTIFICATION:

#### Emergency Overview

#### OSHA Hazards

Combustible Liquid, Harmful by ingestion, Irritant

#### GHS Classification

Flammable liquids (Category 3)

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Serious eye damage (Category 1)

Specific target organ toxicity - single exposure (Category 3)

#### GHS Label elements, including precautionary statements

Pictogram

Signal word Warning

#### Hazard statement(s)

H226 Flammable liquid and vapor.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.

#### Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P280 Wear protective gloves/ eye protection/ face protection.  
P305 P351 P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### HMIS Classification

Health hazard 1  
Flammability 2  
Physical hazards 1

**NFPA Rating**

Health hazard	1
Fire	2
Reactivity Hazard	0

**Potential Health Effects**

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	Harmful if absorbed through skin. May cause skin irritation
Eyes	Causes eye irritation.
Ingestion	Harmful if swallowed

**3. COMPOSITION AND INFORMATION ON INGREDIENTS:**

<b>Formula</b>	C5 H7 N S
<b>Molecular Weight</b>	113.18 g/mol

CAS-No	EC-No	Index-No.	Concentration
3581-91-7	222-703-3		

**4. FIRST-AID GUIDE:****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIRE-FIGHTING GUIDE:****Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point.

Keep away from heat/sparks/open flame/hot surface. No smoking.

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. -Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

**Further information**

Use water spray to cool unopened containers.

**6. ACCIDENTAL RELEASE GUIDE:****Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 12).

**7. HANDLING AND STORAGE:****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**8. EXPOSURE AND PERSONAL PROTECTION:**

Contains no substances with occupational exposure limit values.

**Personal protective equipment:****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### **9. PHYSICAL AND CHEMICAL PROPERTIES:**

#### **Appearance**

Form LIQUID  
Color COLORLESS TO AMBER

#### **Safety data**

Melting point (°C) no data available  
Boiling point (°C) 158  
Flash point (°F) Closed cup 124  
Vapor pressure (mmHg@20°C) no data available  
Density @25 °C no data available  
Water solubility SOLUBLE  
Partition coefficient:  
n-octanol/water log Pow: 1.388  
Relative vapor density no data available  
Odor NUTTY, ROASTED

### **10. STABILITY AND REACTIVITY:**

#### **Chemical stability**

Stable under recommended storage conditions.

#### **Conditions to avoid**

Heat, flames and sparks.

#### **Materials to avoid**

Strong oxidizing agents

#### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

### **11. TOXICOLOGICAL INFORMATION:**

#### **Acute toxicity**

##### **Oral LD50**

LD50 Oral - rat - 960 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Chromodacryorrhoea. Lungs, Thorax, or Respiration: Dyspnea. Nutritional and Gross Metabolic: Changes in Body temperature decrease.

#### **Respiratory or skin sensitization**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

## **Carcinogenicity**

### **IARC:**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### **ACGIH:**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### **NTP:**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### **OSHA:**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

## **Specific target organ toxicity - single exposure (Globally Harmonized System)**

May cause respiratory irritation.

### **Potential health effects**

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

### **Signs and Symptoms of Exposure**

Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### **Additional Information**

RTECS: XJ4380000

## **12. DISPOSAL RECOMMENDATIONS:**

### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

### **Contaminated packaging**

Dispose of as unused product.

## **13. TRANSPORTATION INFORMATION:**

### **DOT (US)**

UN number: 1993    Class: 3    Packing group: III  
Proper shipping name: FLAMMABLE LIQUID N.O.S.

### **IMDG**

UN number: 1993    Class: 3    Packing group: III  
Proper shipping name: FLAMMABLE LIQUID N.O.S.

### **IATA**

UN number: 1993    Class: 3    Packing group: III

Proper shipping name: FLAMMABLE LIQUID N.O.S.

#### 14. REGULATORY INFORMATION:

##### **OSHA Hazards**

Combustible Liquid, Harmful by ingestion, Irritant

##### **SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### **SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

##### **SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard

##### **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

##### **Pennsylvania Right To Know Components**

4,5-Dimethylthiazole	CAS-No.	Revision Date
	3581-91-7	

##### **New Jersey Right To Know Components**

4,5-Dimethylthiazole	CAS-No.	Revision Date
	3581-91-7	

##### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### 15. OTHER INFORMATION:

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the MSDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the MSDS. The user should review these regulations to ensure full compliance.

Material Safety Data Sheet prepared by: **M & U International LLC**