

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** 4,7-Dimethyl-1,10-phenanthroline  
**Synonyms:** 1,8-Dimethyl-4,5-diazaphenanthrene  
**Company Identification:** PI Chemicals Ltd.  
Building B, 633 E Shan Road, Pudong New Area  
Shanghai 200127, China  
**Telephone Number:** 86-21-58953700  
**Fax Number:** 86-21-58953701

### Section 2 - Product Information

**Catalog Number:** PI-29010  
**CAS Number:** 3248-05-3  
**MDL Number:** MFCD00004979  
**EC Number:** 221-827-5  
**Purity:** 98%

### Section 3 - Physical and Chemical Properties

**Physical state:** Powder  
**Color:** Brown  
**Molecular Formula:** C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>  
**Molecular Weight:** 208.26  
**Freezing/Melting Point:** 193 - 195 °C (379 - 383 °F) - lit  
**Boiling Point:** Undetermined  
**Flash Point:** Undetermined  
**Autoignition Temperature:** Undetermined  
**Refractive Index (nD20):** Undetermined  
**Density:** Undetermined  
**Decomposition Temperature:** Undetermined  
**Solubility:** Undetermined

### Section 4 - Hazards Identification

**Eye:** Causes eye irritation.  
**Skin:** Causes skin irritation. Harmful if absorbed through the skin.  
**Ingestion:** May cause irritation of the digestive tract. Toxic if swallowed.  
**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

## **Section 5 - First Aid Measures**

- Eye:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin:** Get medical aid. Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops and persists.
- Ingestion:** Get medical aid immediately. Wash mouth out with water.
- Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

## **Section 6 - Stability and Reactivity**

- Chemical Stability:** Stable under recommended temperatures and pressures.
- Materials to avoid:** Strong oxidizing agents.
- Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides.
- Hazardous Polymerization:** Has not been reported.

## **Section 7 - Handling and Storage**

- Handling:** Avoid breathing dust, vapor, mist, or gas. Keep container tightly closed. Avoid contact with skin and eyes. Wash thoroughly after handling. Mechanical exhaust required.
- Storage:** Keep container tightly closed in a dry and well-ventilated place.

## **Section 8 - Personal Protection**

- Eyes:** Wear appropriate protective eyeglasses.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## **Section 9 - Fire Fighting Measures**

- General Information:** As in any fire, wear a self-contained breathing apparatus, MSHA/NIOSH (approved or equivalent) and protective clothing to prevent contact with skin and eyes.
- Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

## **Section 10 - Accidental Release Measures**

- General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container.

### **Section 11 - Toxicological Information**

**RTECS#:** CAS# 3248-05-3: Not available.

**LD50/LC50:** RTECS: Not available.

**Carcinogenicity:** 4,7-Dimethyl-1,10-phenanthroline –Not listed as a carcinogen by ACGIH, IARC, NTP, or OSHA.

### **Section 12 - Environmental information**

No data available .

### **Section 13 - Disposal Consideration**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

### **Section 14 - Transport Information**

**IATA:** Not dangerous goods.

**IMO:** Not dangerous goods.

**RID/ADR:** Not dangerous goods.

### **Section 15 - Regulatory Information**

#### **European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: Xn

Indication of Danger: Harmful

Risk Phrases:

R 36/37/38: Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

#### **WGK (Water Danger/Protection)**

CAS# 3248-05-3: 3

#### **US Federal**

##### **TSCA**

CAS# 3248-05-3 is not listed on the TSCA Inventory. It is for research and development use only.

**Section 16 - Additional Information****MSDS Creation Date:** 11 September, 2008**Update:** 12 August, 2011

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