

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: 1,10-Phenanthroline anhydrous
Synonyms:
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-32326
CAS Number: 66-71-7
MDL Number: MFCD00011678
EC Number: 200-629-2
Purity: 99%

Section 3 - Physical and Chemical Properties

Physical state: Crystal
Color: White
Molecular Formula: C₁₂H₈N₂
Molecular Weight: 180.21
Freezing/Melting Point: 114 - 117 °C (237 - 243 °F)
Boiling Point: Undertermined
Flash Point: Undertermined
Autoignition Temperature: Undertermined
Refractive Index (nD20): Undertermined
Density: Undertermined
Decomposition Temperature: Undertermined
Solubility: Undertermined

Section 4 - Hazards Identification

Eye: May cause eye irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Ingestion: Toxic if swallowed.
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Section 5 - First Aid Measures

- Eye:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
- Skin:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
- Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.
- Inhalation:** If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Section 6 - Stability and Reactivity

- Chemical Stability:** Stable under recommended storage conditions.
- Materials to avoid:** Strong oxidizing agents, Strong acids.
- Conditions to Avoid:** Not available.
- Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides (NO_x).
- Hazardous Polymerization:** Will not occur.

Section 7 - Handling and Storage

- Handling:** Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
- Storage:** Keep container tightly closed in a dry and well-ventilated place. Store under inert gas. Hygroscopic.

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 and Explosion Hazard Data

- 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# 66-71-7: SF8300000.
LD50/LC50: Acute toxicity: LD50 Oral - rat - 132 mg/kg.
Carcinogenicity: 1,10-Phenanthroline anhydrous -Not listed as a carcinogen by ACGIH, IARC, NTP, or OSHA.

Section 12 - Environmental information

Not 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: UN-Number: 2811 Class: 6.1 Packing group: III.
IMO: UN-Number: 2811 Class: 6.1 Packing group: III.
RID/ADR: UN-Number: 2811 Class: 6.1 Packing group: III.

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Symbol of Danger: T,N

Indication of Danger: Toxic, Dangerous for the environment.

Risk Phrases:

R 25: Toxic if swallowed.

R 50/53: Very Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

S 60: This material and/or its container must be disposed of as hazardous waste.

S 61: Avoid release to the environment. Refer to special instructions safety data sheet.

WGK (Water Danger/Protection)

CAS# 66-71-7: 3.

US Federal

TSCA

CAS# 66-71-7 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Additional Information

MSDS Creation Date: 6 March, 2009
Update: 25 December, 2010

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