

## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Chlorothioformic acid phenyl ester  
**Synonyms:** Phenyl thionochloroformate; O-Phenyl chlorothionoformate  
**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-13044  
**CAS Number:** 1005-56-7  
**MDL Number:** MFCD00004920  
**EC Number:** 213-736-4  
**Purity:** 96%

### Section 3 - Physical and Chemical Properties

**Form:** Yellow liquid  
**Molecular Formula:** C<sub>7</sub>H<sub>5</sub>ClOS  
**Molecular Weight:** 172.64  
**Freezing/Melting Point:** Not available  
**Boiling Point:** 81 - 83 °C (178 - 181 °F) at 8 hPa (6 mmHg)  
**Flash Point:** 81 °C (178 °F) - closed cup  
**Autoignition Temperature:** Not available  
**Refractive Index (n<sub>D</sub>20):** Not available  
**Density:** 1.248 g/mL at 25 °C (77 °F)  
**Decomposition Temperature:** Not available  
**Solubility:** Not available

### Section 4 - Hazards Identification

**Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin:** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes:** Cause eye irritation.  
**Ingestion:** May be harmful if swallowed. Causes burns.

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

- 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:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
- In case of eye contact:** Continue rinsing eyes during transport to hospital. 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.

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

- Chemical Stability:** Stable under recommended storage conditions.
- Materials to avoid:** Strong oxidizing agents.
- Hazardous Decomposition Products:** Carbon oxides, Sulphur oxides, Hydrogen chloride gas.

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

- Handling:** Avoid inhalation of vapour or mist.  
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
- 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.  
Store under inert gas. Moisture sensitive. Exposure to moisture.

## **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# 1005-56-7: Not available.

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

**Carcinogenicity:** Chlorothioformic acid phenyl ester  
–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: 3265 Class: 8 Packing group: II.

**IMO:** UN-Number: 3265 Class: 8 Packing group: II.

**RID/ADR:** UN-Number: 3265 Class: 8 Packing group: II.

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

**Hazard Symbols:** C

**Indication of Danger:** Corrosive

**Risk Phrases:**

R 34: Causes burns.

**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.

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

**WGK (Water Danger/Protection)**

CAS#1005-56-7: 3.

### ***Section 16 - Additional Information***

**MSDS Creation Date:** August 17, 2009

**Update:** May 23, 2011

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