

## Material Safety Data Sheet

### Section 1 – Chemical Product and Company Identification

<b>MSDS Name:</b>	Methotrexate
<b>Synonyms:</b>	N-(4-(((2,4-Diamino-6-pteridiny)l)methyl)methylamino)benzoyl)-D-glutamic acid
<b>Company Identification:</b>	PI Chemicals Ltd. Room 6-306, Building 2 1341 Pudong South Road Pudong New Area, Shanghai 200212, China
<b>Telephone Number:</b>	86-21-51389368
<b>Fax Number:</b>	86-21-51389367
<b>Emergency Number:</b>	86-21-51389369

### Section 2 – Product Information

<b>Catalog Number:</b>	PI-13747
<b>CAS #:</b>	51865-79-3
<b>Purity:</b>	99.0%

### Section 3 – Physical and Chemical Properties

<b>Physical state:</b>	Crystalline powder
<b>Color:</b>	Orange yellow
<b>Odor:</b>	Not available
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>22</sub> N <sub>8</sub> O <sub>5</sub>
<b>Molecular Weight:</b>	454.44
<b>Freezing/Melting Point:</b>	Not available
<b>Boiling Point:</b>	Not available
<b>Flash Point:</b>	Not available
<b>Autoignition Temperature:</b>	Not available
<b>Refractive Index (nD20):</b>	Not available
<b>Density:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Solubility:</b>	Not available

### 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 normal temperatures and pressures.
- Materials to avoid:** Strong oxidizing agents.
- Conditions to Avoid:** Incompatible materials.
- Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, 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:** Store in a cool, dry place. Store in a tightly closed container.

## Section 8 – Personal Protection

- Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 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#51865-79-3: MA1224000

**LD50/LC50:** RTECS: CAS#51865-79-3:

LD50 - Lethal dose, 50 percent kill

Unreported

Rodent - rat

18 mg/kg.

**Carcinogenicity:** Methotrexate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

## 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:** No data available

**IMO:** No data available

**RID/ADR:** No data available

## Section 15 – Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Indication of Danger: Irritant

Risk Phrases:

R 22: Harmful if swallowed.

Safety Phrases:

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

WGK (Water Danger/Protection)

CAS#51865-79-3: 3

Canada

CAS#51865-79-3: Not available

### US Federal

#### TSCA

CAS# 51865-79-3 is not listed on the TSCA Inventory. It is for research and development use only.

## Section 16 – Additional Information

**MSDS Creation Date:** September 30, 2007

**Update:** Original

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