

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

MSDS Name: Eflornithine hydrochloride
Synonyms: 2-(Difluoromethyl)-DL-ornithine monohydrochloride
Company Identification: Shanghai PI Chemicals Ltd.
Room 6-306, Building 2
1341 Pudong South Road
Pudong New Area, Shanghai 200212, China
Telephone Number: 86-21-51389368
Fax Number: 86-21-51389367
Emergency Number: 86-21-51389369

Section 2 – Product Information

Catalog Number: PI-19837
CAS #: 68278-23-9
MDL #: Not available
EINECS# 269-532-0
Purity: 98.0%

Section 3 – Physical and Chemical Properties

Physical state: Crystalline powder
Color: White
Odor: Not available
Molecular Formula: $C_6H_{12}F_2N_2O_2 \cdot HCl$
Molecular Weight: 218.63
Freezing/Melting Point: 181-184 deg C
Boiling Point: Not available
Flash Point: Not available
Autoignition Temperature: Not available
Refractive Index (nD20): Not available
Density: Not available
Decomposition Temperature: Not available
Solubility: Not available

Section 4 – Hazards Identification

- Eye:** Causes eye irritation.
- Ingestion:** May cause irritation of the digestive tract.
- 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, hydrogen fluoride, hydrogen chloride.
- 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#68278-23-9: RM2981900.

LD50/LC50: RTECS: CAS#68278-23-9:

LD50

Oral

Rodent – rat

>5 gm/kg;

LD50

Intraperitoneal

Rodent – rat

>3 gm/kg;

LD50

Oral

Rodent – mouse

>5 gm/kg;

LD50

Intraperitoneal

Rodent – mouse

>3 gm/kg.

Carcinogenicity: Eflornithine hydrochloride - 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: This substance is considered to be non-hazardous for transport.

IMO: This substance is considered to be non-hazardous for transport.

RID/ADR: This substance is considered to be non-hazardous for transport.

Section 15 – Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Indication of Danger:

Risk Phrases:

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#68278-23-9: 3

Canada

CAS#68278-23-9: Not available

US Federal

TSCA

CAS# 68278-23-9 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 – Additional Information

MSDS Creation Date: August 31, 2007

Update: Original

The above information is believed to be accurate and represents the best knowledge available to us currently. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall PI Chemicals, be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, even if PI Chemicals has been advised of the possibility of such damages.