IS Chemical Technology
INNOVATIVE SERVICE

Material Safety Data Sheet

1. Composition/information on ingredients

Product Name: Eflornithine hydrochloride hydrate
Synonyms:
Company Identification: Shanghai IS Chemicals Technology LTD.
Address: Shanghai Torch innovation Park of Fine Chemical Industry, No. 688 Qiushi Road, Jinshan District, Shanghai China, Zip, 201512

Telephone Number: 86-21-52685808
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2. Identification of the substance

Catalog Number: I06-0530
CAS # : 96020-91-6
Purity: 98.0%
EINECS#

3. Hazards identification

EMERGENCY OVERVIEW
Harmful if swallowed. Irritating to eyes, respiratory system and skin.Light sensitive.Moisture sensitive.
Potential Health Effects
Eye:
Causes eye irritation.
Skin:
Causes skin irritation.
Ingestion:
May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation:
May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause effects similar to those described for ingestion.
Chronic:
No information found.

4. First aid measures

Eyes:
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin:
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Ingestion:
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation:
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.
General advice:
Consult a physician. Show this safety data sheet to the doctor in attendance.

5. Fire fighting measures

General Information:
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Extinguishing Media:
In case of fire, use water spray to cool unopened containers.

6. Accidental release measures

General Information:
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Spills/Leaks:
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

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:
Store in cool place. 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.
Light sensitive. Store under inert gas.

8. Exposure Controls / PPE

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits CAS#96020-91-6:

Personal Protective Equipment

Eyes:
Safety glasses.
Skin:
Wear appropriate protective gloves to prevent skin exposure.
Clothing:
Wear appropriate protective clothing to prevent skin exposure.
Respirators:
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and chemical properties

Form: Solid.
Color: White.
Odor: None reported.
pH: Not available.
Vapor Pressure: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: Not available
Autoignition Temperature: Not applicable.
Flash Point: Not applicable.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature: Not available.
Solubility in water: Not available.
Specific Gravity/Density: Not available.
Molecular Formula: C6H12F2N2O2.ClH.H2O
Molecular Weight: 236.07

10. Stability and reactivity

Chemical Stability:
Stable under recommended storage conditions.
Conditions to Avoid:
Heat, flames and sparks.
Incompatibilities with Other Materials:
Hazardous polymerisation may occur.
Hazardous Decomposition Products:
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Phosgene.

11. Toxicological information

Acute toxicity:Not available.
Irritation and corrosion:Not available.
Sensitisation: May cause allergic respiratory and skin reactions.
Chronic exposure:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Signs and Symptoms of Exposure:
Burning sensation,cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.
Potential Health Effects:
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 burns.
Eyes: Causes eye burns.
Ingestion: Harmful if swallowed. Causes burns.

12. Ecological information

Ecotoxicity: Not available.
Water danger/protection: Not available.

13. Disposal consideration

Product:
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensedprofessional waste disposal service to dispose of this material.
Contaminated packaging:
Dispose of as unused product.

14. Transportation information

IATA
Not applicable.
IMDG
Not applicable.
RID/ADR
Not applicable.

15. Regulatory information

Labelling according to EC Directives

Hazard symbols
C Corrosive
R-phrase(s)

R10	*Flammable.*
R22	*Harmful if swallowed.*
R34	*Causes burns.*
R42/43	*May cause sensitization by inhalation and skin contact.*

S-phrase(s)

S23	*Do not breathe vapour.*
S24	*Avoid contact with skin.*
S26	*In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*
S36/37/39	*Wear suitable protective clothing, gloves and eye/face protection.*
S45	*In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).*

Caution - substance not yet tested completely.

16. Other information

The information above is believed to be accurate and represents the best information currently available to us. 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 the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary