

MTI Corporation

Material Safety Data Sheet

Revision Date: Dec 2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lithium hexafluorophosphate in EC/DMC/DEC

Catalog Codes:N/A

Chemical Formula: LiPF₆

CAS#: 21324-40-3

Contact Information:

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2. HAZARDS IDENTIFICATION

Emergency Overview:

Flammable liquid

Skin corrosion

Serious eye damage

Specific target organ toxicity – single exposure

HMIS Classification:

Health: 3

Flammability: 3

Physical hazards: 0

NFPA Rating:

Health: 3

Flammability: 3

Reactivity: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance Name:

Lithium hexafluorophosphate in Ethylene carbonate/Dimethyl carbonate/Diethyl carbonate

Ingredient Name:

CAS#:

SARA 313:

Lithium hexafluorophosphate

21324-40-3

No

Ethylene carbonate

96-49-1

No

Dimethyl carbonate

616-38-6

No

Diethyl carbonate

105-58-8

No

4. FIRST AID MEASURES

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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Assure adequate flushing by separating the eyelids with fingers.

If swallowed

Do Not induce vomiting. Never give anything by mouth to an unconscious person.

Rinse mouth with water. Consult a physician.

5. FIRE AND EXPLOSION DATA

Suitable extinguishing media

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.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Oxides of phosphorus, Hydrogen fluoride, Lithium oxides.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Procedure to be followed in case of leak or spill:

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

Procedure of personal precautions:

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Method for cleaning up:

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Avoid inhalation of vapor 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

Personal Protective Equipment:

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). 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.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Other: Face shield (8-inch minimum).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Liquid

Flash Point: 26.1°C (79.0°F)

Density: 1.189g/cm³ at 25°C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions.

Materials to Avoid: Strong oxidizing agents, strong bases, strong acids, reducing agents

Possibility of hazardous reactions: Vapors may form explosive mixture with air.

Conditions to avoid: Heat, flames and sparks

Materials to avoid: Forms shock-sensitive mixtures with certain other materials: Iron, Iron salts, heavy metals, Phosphorus, Sulphur compounds, Oxygen, Nickel. Do not store near acids, metals, Chlorinated solvents, water.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure:

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye contact: Causes burns.

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

12. ECOLOGICAL INFORMATION

Toxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Not available

Toxicity of the Products of Biodegradation: Not available

Special Remarks on the Products of Biodegradation: Not available.

13. DISPOSAL CONSIDERATIONS

Product:

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging:

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2920 Class: 8 (3) Packing group: II

Proper shipping name: Corrosive liquids, flammable, n.o.s. (Lithium hexafluorophosphate)

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 2920 Class: 8 (3) Packing group: II

Proper shipping name: Corrosive liquids, flammable, n.o.s. (Lithium hexafluorophosphate)

Marine pollutant: No

IATA

UN number: 2920 Class: 8 (3) Packing group: II

Proper shipping name: Corrosive liquids, flammable, n.o.s. (Lithium hexafluorophosphate)

IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

Symbol of Danger: C

Indication of Danger: Corrosive

Risk Statements: Flammable. Causes burns. Irritating to respiratory system.

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

United States Regulatory Information:

Sara Listed: No

Canada Regulatory Information:

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, it does not represent any guarantee of the properties of the product. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes.