

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Lithium Orthophosphate, Tertiary  
**CHEMICAL FAMILY:** Orthophosphates  
**MOLECULAR FORMULA:**  $\text{Li}_3\text{PO}_4$   
**SYNONYM(s):** Catalytic Lithium Phosphate, Trilithium Phosphate, Tribasic Lithium Phosphate  
**GENERAL USE:** Industrial Manufacturing

**MANUFACTURER**  
FMC CORPORATION  
Lithium Division  
P.O. Box 795  
Bessemer City, NC 28016-0795  
**General Information:** (704) 868-5300

**Emergency Telephone Numbers:**  
**CHEMTREC** (800) 424-9300  
**Emergency Phone** (704) 629-5361 (Plant) Call Collect 24 Hr/Day  
**Emergency Phone** (303) 595-9048 (Medical) Call Collect

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt. %</u>
Lithium orthophosphate, tertiary	10377-52-3	99
lithium tetraborate	12007-60-2	<3

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**IMMEDIATE CONCERNS:** White powder  
**POTENTIAL HEALTH EFFECTS:** May be extremely irritating to eyes, nose, throat and mucous membranes.

**COMMENTS:**  
(See Section 11, Toxicological Information)

### 4. FIRST AID MEASURES

**EYES:** Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

**SKIN:** Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

**INGESTION:** Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

**INHALATION:** Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

#### NOTES TO MEDICAL DOCTOR:

Effects of oral exposure to lithium ion are well documented in the medical literature. Low toxicity is anticipated. In such cases, standard protocols for overdose are suggested. Treatment is otherwise symptomatic and supportive.

### 5. FIRE FIGHTING MEASURES

**FLAMMABLE LIMITS:** Upper: Not available Lower: Not available.  
**GENERAL HAZARD:** Non-combustible  
**EXTINGUISHING MEDIA:** Dry chemical, CO2, water spray or regular foam.  
**HAZARDOUS COMBUSTION PRODUCTS:** None  
**FIRE FIGHTING PROCEDURES:** Wear full protective clothing and self-contained breathing apparatus (SCBA) approved for fire fighting. This is necessary to protect against the hazards of heat, products of combustion and oxygen deficiency. Do not breathe smoke, gases or vapors generated.  
**AUTOIGNITION TEMPERATURE:** Not applicable  
**PROPERTIES CONTRIBUTING TO FLAMMABILITY:** None  
**FLASH POINT:** Not applicable  
**SENSITIVITY TO STATIC DISCHARGE:** Not applicable  
**SENSITIVITY TO IMPACT:** Not applicable

**COMMENTS:**  
(See Section 10, Stability and Reactivity)

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## 6. ACCIDENTAL RELEASE MEASURES

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**RELEASE NOTES:** Sweep up and place in suitable container. Dispose of waste according to local and Federal laws and regulations. Before cleanup measures begin, review the entire MSDS with particular attention to Section 3, Emergency Overview and Potential Health Effects; and Section 8, Recommended Personal Protective Equipment.

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## 7. HANDLING AND STORAGE

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**HANDLING:** Avoid contact with eyes, skin or clothing. Use with adequate ventilation. Wear safety glasses or goggles and rubber gloves. Wash thoroughly after handling.  
**STORAGE:** Keep container closed.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### **EXPOSURE LIMITS**

<b><u>Chemical Name</u></b>	<b><u>TWA (ACGIH)</u></b>	<b><u>STEL/Ceiling (ACGIH)</u></b>	<b><u>PEL (OSHA)</u></b>	<b><u>STEL/Ceiling (OSHA)</u></b>
PNOC <sup>1</sup> , inhalable particulate	10 mg/m <sup>3</sup>			
PNOC <sup>1</sup> , respirable particulate	3 mg/m <sup>3</sup>			

<sup>1</sup>PNOC = Particulates Not Otherwise Classified.

**ENGINEERING CONTROLS:**  
Use local exhaust ventilation to keep airborne concentrations below exposure limits.

### **PERSONAL PROTECTIVE EQUIPMENT**

**Eyes And Face:** Safety glasses or goggles  
**Respiratory:** When engineering controls are not adequate, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts.  
**Protective Clothing:** Rubber gloves  
**Work Hygienic Practices:** Quick-drench eyewash and safety shower.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b><u>ODOR:</u></b>	Not applicable
<b><u>APPEARANCE:</u></b>	White powder
<b><u>pH:</u></b>	Not applicable
<b><u>PERCENT VOLATILE:</u></b>	Not applicable
<b><u>VAPOR PRESSURE:</u></b>	Not applicable
<b><u>VAPOR DENSITY:</u></b>	Not applicable
<b><u>BOILING POINT:</u></b>	Not applicable
<b><u>MELTING POINT:</u></b>	1205°C (2201°F)
<b><u>SOLUBILITY IN WATER:</u></b>	% by wt. @ 20°C (68°F): 0.03
<b><u>EVAPORATION RATE(Butyl Acetate = 1):</u></b>	Not applicable
<b><u>SPECIFIC GRAVITY:</u></b>	2.5 g/cc
<b><u>MOLECULAR WEIGHT:</u></b>	115.79
<b><u>COEFF. OIL/WATER:</u></b>	Not applicable
<b><u>ODOR THRESHOLD:</u></b>	Not applicable
<b><u>FLAMMABLE LIMITS:</u></b>	Upper: Not available Lower: Not available.
<b><u>FLASH POINT:</u></b>	Not applicable
<b><u>AUTOIGNITION TEMPERATURE:</u></b>	Not applicable
<b><u>EXPLOSIVE PROPERTIES:</u></b>	Not explosive
<b><u>OXIDIZING PROPERTIES:</u></b>	Not an oxidizer

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## 10. STABILITY AND REACTIVITY

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<b><u>CONDITIONS TO AVOID:</u></b>	None
<b><u>STABILITY:</u></b>	Stable
<b><u>POLYMERIZATION:</u></b>	Does not polymerize
<b><u>HAZARDOUS DECOMPOSITION PRODUCTS:</u></b>	None
<b><u>INCOMPATIBLE MATERIALS:</u></b>	None

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## 11. TOXICOLOGICAL INFORMATION

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<b><u>Eye Contact:</u></b>	No data available for the product.
<b><u>Skin Contact:</u></b>	non-corrosive, Corrositex In-Vitro Skin Corrosion assay [FMC LD 15720]
<b><u>Skin Absorption:</u></b>	No data available for the product.
<b><u>Ingestion:</u></b>	No data available for the product.
<b><u>Inhalation:</u></b>	No data available for the product.

### **Acute Effects From Overexposure:**

Based on data for trisodium phosphate, a similar compound, this product is expected to be extremely irritating to the eyes and minimally irritating to the skin. It may also be irritating to the upper respiratory tract when inhaled or gastrointestinal tract when ingested.

### **Chronic Effects From Overexposure:**

No data available for the product.

<b><u>Sensitization:</u></b>	No
<b><u>Carcinogenicity:</u></b>	EH40: Not listed. IARC: Not listed.

NTP: Not listed.  
OSHA: Not considered a carcinogen under OSHA.  
ACGIH: Not listed

**Mutagenicity:** No  
**Reproductive Toxicity:** No

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## 12. ECOLOGICAL INFORMATION

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**Ecotoxicological Information:**  
No data available for the product.

**Chemical Fate Information:**  
No data available for the product.

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## 13. DISPOSAL CONSIDERATIONS

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**DISPOSAL METHOD:** Dispose of waste according to local and Federal laws and regulations.

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## 14. TRANSPORT INFORMATION

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**PROPER SHIPPING NAME:** None  
**CLASSIFICATION:** None  
**LABELS:** None  
**UN NUMBER:** None  
**PACKING GROUP:** None  
**CUSTOM TARIFF NO:** 2835.29.9050  
**MARINE POLLUTANT:** No  
**PIH:** Not designated Poison Inhalation Hazard by US DOT.

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## 15. REGULATORY INFORMATION

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**UNITED STATES**  
**SECTION 311 HAZARD CATEGORY (40 CFR 370):** Immediate (acute) health hazard.  
**SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):** This product does not contain a toxic chemical subject to the reporting requirements of Section 313 of Emergency Planning and Community Right-To-Know Act of 1986.  
**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):** Not listed  
**CERCLA HAZARDOUS SUBSTANCE (40 CFR 302.4):** Not listed  
**TSCA SEC 12B EXPORT NOTIFICATION:** This product is not subject to TSCA 12 (b) Export Notification Requirements.  
**TSCA INVENTORY STATUS (40 CFR 710):** Listed  
**CANADA**  
**WHMIS:** Product Identification No.: None  
Hazard Classification: Class D, Division 2B (Eye and skin irritant)  
Ingredient Disclosure List: Not listed

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## 16. OTHER INFORMATION

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**REVISION SUMMARY:** Revision # 5: Regular review completed. Section 14 revised.

**NFPA RATING**

**HEALTH:** 1

**FLAMMABILITY:** 0

**REACTIVITY:** 0

**SPECIAL:** None

This MSDS has been prepared to meet U. S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

type 1b

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