

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Lithium Molybdate In Aqueous Solution  
**CHEMICAL FAMILY:** Molybdates  
**MOLECULAR FORMULA:**  $\text{Li}_2\text{MoO}_4$   
**SYNONYM(s):** Molybdic Acid, Dilithium Salt, Lithium Molybdenum Oxide  
**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 molybdate	13568-40-6	30 - 40
Water	7732-18-5	60 - 70

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**IMMEDIATE CONCERNS:** Odorless, clear liquid.  
**POTENTIAL HEALTH EFFECTS:** Exposure to large amounts of molybdenum may irritate the upper respiratory tract and damage the liver, spleen and kidneys.

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

### 4. FIRST AID MEASURES

**EYES:** Flush with water for at least 15 minutes. If irritation occurs and persists, contact a medical doctor.

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

**INGESTION:** Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

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

**NOTES TO MEDICAL DOCTOR:**  
This product is anticipated to have low oral toxicity and may be irritating to eyes, skin and mucous membranes. Treatment is symptomatic and supportive.

### 5. FIRE FIGHTING MEASURES

**FLAMMABLE LIMITS:** Upper: Not available Lower: Not available.  
**GENERAL HAZARD:** No known physical 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:** Contain spill with absorbent. Transfer or pump into a 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. Avoid breathing mist. Use with adequate ventilation. Wear safety glasses or goggles and rubber gloves. Wash thoroughly after handling.  
**STORAGE:** Keep away from strong acids. 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>
Molybdenum, soluble compounds [as Mo]	5 mg/m <sup>3</sup>		5 mg/m <sup>3</sup>	

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

### **PERSONAL PROTECTIVE EQUIPMENT**

**Eyes And Face:** Safety glasses or goggles  
**Respiratory:** If product is misting or when engineering controls are not adequate, wear a NIOSH/MSHA respirator approved for inorganic dusts and mists.  
**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>	Odorless
<b><u>APPEARANCE:</u></b>	Clear liquid
<b><u>pH:</u></b>	7 to 7.5
<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>	A 30% aqueous solution boils at 102°C
<b><u>MELTING POINT:</u></b>	Not available
<b><u>SOLUBILITY IN WATER:</u></b>	Miscible in any proportion
<b><u>EVAPORATION RATE(Butyl Acetate = 1):</u></b>	Not applicable
<b><u>SPECIFIC GRAVITY:</u></b>	Not available
<b><u>MOLECULAR WEIGHT:</u></b>	173.82 (Lithium molybdate)
<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>	Will not occur
<b><u>HAZARDOUS DECOMPOSITION</u></b>	None
<b><u>PRODUCTS:</u></b>	
<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>	No data available for the product.		
	Lithium molybdate:		
	Non-corrosive, Corrositex In-Vitro Skin Corrosion		[FMC LD 16557]
<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:**  
No data available for the product.

**Chronic Effects From Overexposure:**  
No data available for the product.

**Sensitization:** 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
<b><u>Mutagenicity:</u></b>	No
<b><u>Reproductive Toxicity:</u></b>	No

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## 12. ECOLOGICAL INFORMATION

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### **Ecotoxicological Information:**

Environmental toxicity testing of the product has not been carried out. Environmental toxicity testing of the product has not been carried out. Data for a similar substance, sodium molybdate, is provided below:

Sodium Molybdate:

96 hr. LC<sub>50</sub> = 7600 mg/l (fish)

48 hr. EC<sub>50</sub> = 330 mg/l (daphnids)

72 hr. IC<sub>50</sub> >100 (algal growth)

### **Chemical Fate Information:**

Lithium molybdate exists as the inorganic ions of lithium and molybdenum in aqueous solutions. Lithium molybdate is not biodegraded, bioaccumulated or photodegraded.

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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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<b><u>PROPER SHIPPING NAME:</u></b>	None
<b><u>CLASSIFICATION:</u></b>	None
<b><u>LABELS:</u></b>	None
<b><u>UN NUMBER:</u></b>	None
<b><u>PACKING GROUP:</u></b>	None
<b><u>FLASH POINT:</u></b>	Not applicable
<b><u>CUSTOM TARIFF NO:</u></b>	2841.70.0000
<b><u>MARINE POLLUTANT:</u></b>	No
<b><u>PIH:</u></b>	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**

Product Identification No.: None

**WHMIS:**

Hazard Classification: None

Ingredient Disclosure List: Not listed

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## **16. OTHER INFORMATION**

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**REVISION SUMMARY:** Revision # 5: Regular review completed. Sections 11, 12, and 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 1a

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