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MATERIAL SAFETY DATA SHEET

I PRODUCT ID	ENTIFICATION			
Synonym: Lithia,			Chemical Family: Formula:	Metal oxide Li ₂ O
II HAZARDOUS	INGREDIENTS			
Hazardous Component	s % OSHA/PEL	ACGIH/TLV	Sec. 302 Sec.	. 304 Sec. 313
Lithium Oxide	0-100 N/E	N/E	No No	No
IMIS Ratings: Health		Reactivity: 2 Pro	tective Equipment: J (gog	ggles, gloves, apron, respirato
biling Point: 1200 °C		Melting Point:	1700 °C	
pecific Gravity (H2O=1):2.013 gm/cc at 25 °Capor Pressure:N/A		Vapor Density: Solubility in H ₂ O:	N/A 6.67 at 0 °C	
ppearance and Odor: White granular powder, no odor.		wder, no odor.	% Volatiles:	N/A
Flash Point: N/A	PLOSION HAZARDS DAT per: N/A Lower: N/A	⁷ A	Autoignition Temper	rature: N/A
Special Fire Fighting P to prevent contact with s Unusual Fire and Explo	Use suitable extinguishing me rocedures: Firefighters must kin and eyes. Fumes from fir osion Hazard: If involved in ioxide and water from the atm	wear full face, self-co e are hazardous. Isola a fire, lithium oxide r	ontained breathing apparatu ite runoff to prevent enviro nay emit toxic fumes. Stro	nmental pollution. ng alkali. Lithium oxide
	ZARD INFORMATION			
Effects of Exposure:				
To the best of o investigated and reported	ur knowledge the chemical, p l.	hysical and toxicolog	cal properties of lithium or	kide have not been thoroughl

The toxicity of lithium compounds is a function of their solubility in water. Lithium ion has central nervous system toxicity. The initial effects of lithium exposure are tremors of the hands, nausea, micturition, slurred speech, sluggishness, sleepiness, vertigo, thirst, and increased urine volume. Effects from continued exposure are apathy, anorexia, fatigue, lethargy, muscular weakness, and changes in ECG. Long-term exposure leads to hypothyroidism, leukocytosis, edema, weight gain, polydipsia/polyuria (increased water intake leading to increased urinary output), memory impairment, seizures, kidney damage, shock, hypotension, cardiac arrhythmias, coma, death. (Sax, Dangerous Properties of Industrial Materials, eighth edition) Acute Effects:

Inhalation: SEVERE IRRITANT AND CORROSIVE. Causes irritation to the respiratory tract and mucous membranes. Ingestion: SEVERE IRRITANT AND CORROSIVE. May cause central nervous system effects, circulatory failure and cardiovascular collapse. Skin: SEVERE IRRITANT AND CORROSIVE. Eye: SEVERE IRRITANT AND CORROSIVE.

Chronic Effects:

Inhalation: May cause pulmonary edema and lung damage.
Ingestion: May cause gastrointestinal irritation, renal dysfunction, derangement of neuromuscular activity, diabetes and kidney damage.
Skin: May be an irritant and corrosive.
Eye: May cause blurred vision.

Routes of Entry: Inhalation, ingestion, skin and eyes.

Target Organs: May affect respiratory system, skin and eyes. **Medical Conditions Generally Aggravated by Exposure**: Pre-existing respiratory and skin disorders.

Carcinogenicity: NTP: No IARC: No OSHA: No

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention immediately.

INGESTION: Do not induce vomiting. Seek immediate medical attention.

SKIN: Immediately wash affected area with plenty of water, remove contaminated clothing. Obtain medical assistance immediately. **EYE**: Flush with copious amounts of water, including under eyelids, for at least 15 minutes. Obtain medical attention immediately.

VI REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None **Incompatibility (Materials to Avoid)**: Water, steam.

Hazardous Decomposition Products: Lithium hydroxide, oxides of lithium, lithium and hydrogen gas. Hazardous Polymerization: Will not occur.

VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Wear appropriate respiratory and protective equipment specified in Section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste Disposal Method: Dispose of in accordance with Local, State and Federal regulations.

VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection: Wear a NIOSH/MSHA approved respirator when adequate ventilation is not available. **Ventilation**: Handle in a controlled atmosphere in an inert gas such as argon. Use local exhaust to maintain concentration at low levels. General exhaust is not recommended.

Protective Gloves: Rubber **Eye Protection**: Safety goggles or glasses Other Protective Equipment: Protective gear suitable to prevent contamination.

IX SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Store in tightly sealed container. Store in a cool, dry area. Wash thoroughly after handling.

Other Precautions: Lithium oxide readily absorbs carbon dioxide and water from the atmosphere. Handle and store in a controlled environment and in an inert gas, such as argon.

Work Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Issued by: S. Dierks Date: June 1993