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MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

Trade Name:Lithium PeroxideChemical Family:Metal oxideFormula:Li202CAS #:12031-80-0

II HAZARDOUS INGREDIENTS

Hazardous Components%OSHA/PELACGIH/TLVSec. 302Sec. 304Sec. 313Lithium Peroxide0-100N/EN/ENoNoNo

HMIS Ratings: Health: 3 Flammability: 0 Reactivity: 2 Protective Equipment: J (goggles, gloves, apron, respirator)

III PHYSICAL DATA

Boiling Point: N/E or N/A N/E or N/A **Melting Point:** Specific Gravity (H,O=1): 2.14 gm/cc at 20 °C Vapor Density: N/A Vapor Pressure: Solubility in H₂O: Soluble N/A Appearance and Odor: Fine white powder and pieces, no odor. % Volatiles: N/E or N/A

IV FIRE AND EXPLOSION HAZARDS DATA

Flash Point: N/E or N/A

Autoignition Temperature: N/A

Flammable Limits: Upper: N/A Lower: N/A

Extinguishing Media: Use suitable extinguishing media for surrounding material and type of fire.

Special Fire Fighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazard: Strong oxidizing agent, which may ignite or accelerate combustion. Dangerous fire and explosion risk in contact with organic materials. Will react with water and steam to produce heat. May react with reducing materials.

V HEALTH HAZARD INFORMATION

Effects of Exposure:

To the best of our knowledge the chemical, physical and toxicological properties of lithium peroxide have not been thoroughly investigated and reported.

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.

Inorganic peroxides have variable toxicity. They may cause injury on contact with skin or mucous membranes. (Sax,

Dangerous Properties of Industrial Materials, eighth edition)

Acute Effects:

Inhalation: May be an irritant and corrosive to the respiratory tract and mucous membranes.

Ingestion: May cause central nervous system effects, circulatory failure and cardiovascular collapse.

Skin: May be an irritant and corrosive. **Eye**: May be an 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 be an irritant and corrosive.

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

Target Organs: May affect respiratory system, lungs, central nervous system, kidneys, 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, reducing agents, organic material, metallic oxides and salts.

Hazardous Decomposition Products: Lithium hydroxide and oxygen.

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 dust-mist-vapor respirator.

Ventilation: Handle in a controlled atmosphere. Use local exhaust to maintain concentration at low levels. General exhaust is not recommended.

Protective Gloves: Rubber gloves **Eye Protection**: Safety goggles

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.

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: January 1994