



FOOTE
CHEMICAL COMPANY

MATERIAL SAFETY DATA

LIH-0001

218

Page 1 of 3

SECTION I - PRODUCT IDENTIFICATION AND PHYSICAL DATA

4000001-CCC

CHEMICAL NAME: Lithium Hydroxide Monohydrate COMMON NAME: Lithium Hydroxide
 CHEMICAL FORMULA: $\text{LiOH} \cdot \text{H}_2\text{O}$ (CAS: 1310-65-2)
 APPEARANCE AND ODOR: White crystals. Odorless.
 HAZARDOUS COMPONENTS OF MIXTURE: Lithium Hydroxide is a compound, not a mixture.
 VAPOR PRESSURE: Essentially Zero at 20°C MELTING POINT: 450°C
 FLASH POINT: No Flash Point FLAMMABLE LIMITS: Not Flammable
 OTHER CHARACTERISTICS: 99% $\text{LiOH} \cdot \text{H}_2\text{O}$
 Soluble in water.

SECTION II - FIRE, EXPLOSION, AND PHYSICAL HAZARD DATA

FIRE AND EXPLOSION HAZARDS: On contact with water, lithium hydroxide generates considerable heat.
 REACTIVITY DATA: When exposed to air, lithium hydroxide picks up CO_2 and cakes over.
 EXTINGUISHING MEDIA: Not Flammable
 SPECIAL FIRE FIGHTING PROCEDURES: Not Flammable
 OTHER PHYSICAL HAZARDS: None

SECTION III - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Do not leave unattended. Sweep up and return to container. Wear personal protection when cleaning up spills or leaks.
 WASTE DISPOSAL METHOD: Neutralize with dilute acetic acid. Follow state and local regulations.

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REVIEWED BY W. E. Fanus

SUPERSEDES: 8/16/84

TITLE Head of Analytical Chemistry

SECTION IV - HEALTH HAZARD DATA

LIH-000

EXPOSURE LIMIT VALUE(S): Neither OSHA nor ACGIH lists a threshold limit value for lithium hydroxide. Foote recommends that exposure to respirable dusts or mists not exceed $2\text{mg}/\text{m}^3$, the ACGIH ceiling limit for sodium hydroxide.

PRIMARY ROUTE(S) OF EXPOSURE: Skin/eye contact or inhalation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Lithium hydroxide reacts corrosively with body moisture causing a burning sensation. If such symptoms occur, flush area with large amounts of water. Follow with a neutralizing solution and see your supervisor about the need for further medical attention.

EFFECTS OF OVEREXPOSURE: Inhalation of lithium hydroxide dust or concentrated mist may cause damage to the upper respiratory tract and to lung tissue. The effects vary from mild irritation to acute inflammation, depending on the severity of the exposure. Prolonged skin contact effects range from irritant dermatitis to deep burns and scarring.

POTENTIAL FOR CARCINOGENICITY: Lithium hydroxide is not listed as a carcinogen or potential carcinogen by the National Toxicology Program of the U.S. Public Health Service, nor has it been found to be a carcinogen or potential carcinogen by OSHA or the International Agency for Research on Cancer. Foote is not aware of any data indicating that lithium hydroxide produces cancer.

EMERGENCY/FIRST AID PROCEDURES: Speed in removing lithium hydroxide is critical to avoid severe caustic burns.

On contact with skin, flush with large amounts of water, if possible, under a deluge type shower. Remove contaminated clothing immediately. Seek immediate medical attention.

On contact with eyes, flush with potable water for 15 minutes with the burned eye nearest the floor so that the chemical is not washed into the other eye. Seek immediate medical attention.

On ingestion, drink large quantities of water to dilute the lithium hydroxide. Do not induce vomiting. Seek immediate medical attention.

LIH-0001

SECTION V - SPECIAL PROTECTION AND PRECAUTIONS

VENTILATION AND ENGINEERING CONTROLS: Engineering controls (e.g. mechanical exhaust) should be in place in order to ensure that employee exposures to lithium hydroxide do not exceed $2\text{mg}/\text{m}^3$.

PERSONAL PROTECTIVE EQUIPMENT: Under conditions in which lithium hydroxide dust levels exceed $2\text{mg}/\text{m}^3$, NIOSH-approved dust respirators should be worn. Dust goggles, gloves which cover the forearm and full length clothing help prevent the lithium hydroxide from contact with body moisture. If there is a potential for splash, wear a full face shield and rubber apron.

SAFE HANDLING, USE AND STORAGE: Store in a cool, dry area. Keep the containers covered or closed.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE: Thoroughly wash equipment to be repaired with water. Collect the solution in labelled containers. Wear full personal protective equipment.

OTHER: None

PROPER SHIPPING NAME: Corrosive Solid, NOS (UN 1759) for truck and rail.
HAZARDOUS LABEL(S) REQUIRED: Corrosive

ADDITIONAL INFORMATION REGARDING THIS MATERIAL AND APPROPRIATE EMERGENCY PROCEDURES MAY BE OBTAINED FROM:

FOOTE SALES REPRESENTATIVE

Foote Mineral Company
Route 100, Exton, PA 19341
(215) 363-6500

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