

LITHIUM HYDRIDE

0813
April 2000

CAS No: 7580-67-8
RTECS No: OJ6300000
UN No: 1414

LiH
Molecular mass: 7.95

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Many reactions may cause fire or explosion.	NO open flames.	Inert gas, special powder, dry sand, NO other agents. NO hydrous agents.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	

EXPOSURE		PREVENT DISPERSION OF DUST! STRICT HYGIENE!	
Inhalation	Cough. Nausea. Vomiting. Confusion. Laboured breathing. Burning sensation. Shortness of breath. Sore throat. Symptoms may be delayed (see Notes).	Local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Refer for medical attention.
Skin	Redness. Skin burns. Blisters. Pain.	Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Severe deep burns. Pain. Blurred vision.	Face shield, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Dizziness. Diarrhoea Abdominal pain. Burning sensation. Shock or collapse. Tremors. Twitching. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Do NOT wash away into sewer. Sweep spilled substance into containers. Carefully collect remainder, then remove to safe place. Chemical protection suit including self-contained breathing apparatus.	UN Hazard Class: 4.3 UN Pack Group: I Airtight. Unbreakable packaging; put breakable packaging into closed unbreakable container.

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-43G04 NFPA Code: H3; F4; R2; W	Separated from strong oxidants. Dry. Keep under inert gas.

IMPORTANT DATA

Physical State; Appearance

ODOURLESS WHITE TO GREYISH HYGROSCOPIC SOLID IN VARIOUS FORMS. TURNS DARK ON EXPOSURE TO LIGHT.

Physical dangers

Dust explosion possible if in powder or granular form, mixed with air.

Chemical dangers

The substance may spontaneously ignite on contact with air. Reacts violently with oxidants halogenated hydrocarbons, acids and water forming flammable/explosive gas (hydrogen - see ICSC0001) and, in the case of water, lithium hydroxide which is very caustic. On contact with hot surfaces or flames this substance decomposes forming irritating alkali fumes.

Occupational exposure limits

TLV: 0.025 mg/m³ (as TWA) (ACGIH 1999).
MAK: 0.025 mg/m³; (1999)

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

Effects of short-term exposure

The substance is corrosive to the eyes the skin and the respiratory tract. Inhalation of the aerosol may cause lung oedema (see Notes).

PHYSICAL PROPERTIES

Decomposes below boiling point at 850°C
Melting point: 680°C
Relative density (water = 1): 0.76-0.77

Solubility in water: reaction
Auto-ignition temperature: 200°C
Explosive limits, vol% in air: see Notes

ENVIRONMENTAL DATA

NOTES

Reacts violently with fire extinguishing agents such as water, carbon dioxide, foam or halogenated compounds such as carbon tetrachloride.
The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.
Immediate administration of an appropriate spray, by a doctor or a person authorized by him/her, should be considered.
Do NOT take working clothes home.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information