

GHS Classification

ID814

lithium hydride

CAS 7580-67-8

Date Classified: May 24, 2006 (Environmental Hazards: Mar. 31, 2006)

Physical Hazards

Reference Manual: GHS Classification Manual (Feb. 10, 2006)

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Explosives	Not applicable	-	-	-	There are no chemical groups associated with explosive properties present in the molecules.
2 Flammable gases	Not applicable	-	-	-	Solid (GHS definition)
3 Flammable aerosols	Not applicable	-	-	-	Not aerosol products
4 Oxidizing gases	Not applicable	-	-	-	Solid (GHS definition)
5 Gases under pressure	Not applicable	-	-	-	Solid (GHS definition)
6 Flammable liquids	Not applicable	-	-	-	Solid (GHS definition)
7 Flammable solids	Classification not possible	-	-	-	Classification not possible due to lack of data though "Combustible solid" (Weiss, 2nd, 1985)
8 Self-reactive substances and mixtures	Not applicable	-	-	-	There are no chemical groups associated with explosive or self-reactive properties present in the molecule.
9 Pyrophoric liquids	Not applicable	-	-	-	Solid (GHS definition)
10 Pyrophoric solids	Not classified	-	-	-	UNRTDG Class: 4.3 (not Subsidiary risks Class: of 4.2)
11 Self-heating substances and mixtures	Not classified	-	-	-	UNRTDG Class: 4.3 (not Subsidiary risks Class: Class: in Class: 4.2)
12 Substances and mixtures, which in contact with water, emit flammable gases	Category 1	Flame	Danger	In contact with water releases flammable gases which may ignite spontaneously	Category 1 UNRTDG Class: 4.3, PG I
13 Oxidizing liquids	Not applicable	-	-	-	Solid (GHS definition)
14 Oxidizing solids	Not classified	-	-	-	Reducing substance
15 Organic peroxides	Not applicable	-	-	-	Inorganic compound
16 Corrosive to metals	Classification not possible	-	-	-	Test methods applicable to solid substances are not available.

Health Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
1 Acute toxicity (oral)	Category 3	Skull and crossbones	Danger	Toxic if swallowed	SPECIES: Rat ENDPOINT: LD50 VALUE: 77.5 mg/kg REFERENCE SOURCE: RTECS (2004)
1 Acute toxicity (dermal)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: gas)	Not applicable	-	-	-	Solid (GHS definition)
1 Acute toxicity (inhalation: vapour)	Classification not possible	-	-	-	No data available
1 Acute toxicity (inhalation: dust, mist)	Category 2	Skull and crossbones	Danger	Fatal if inhaled	There is a report about the rat inhalation toxicity studies in which 2/10 died at 0.022mg/L/4H and 4/10 died (DFGOTvol.3 (1991)) at 0.036mg/L/7H (equivalent: 0.063mg/L/4H). And it is strongly expected that LC50 is 0.05 - 0.5mg/L/4H, it was set as category 2.
2 Skin corrosion / irritation	Category 1A-1C	Corrosion	Danger	Causes severe skin burns and eye damage	There are statements of strong corrosive (ICSC (J), (2000)) and corrosive by short-term exposure to humans (HSDB (2005)). But the time of exposure is unknown. So subsection was not made, and it was classified into 1A-1C.
3 Serious eye damage / eye irritation	Category 1	Corrosion	Danger	Causes serious eye damage	There is the statement that high exposure to eyes causes an irreversible damage (HSDB (2005)), and indicates caustic to the eyes (ICSC (J) (2000)), and corrosion of the skin/irritation are classified into 1A-1C. So it was classified into Category 1.
4 Respiratory/skin sensitization	Classification not possible; Skin sensitization: Classification not possible	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	(Respiratory sensitization)-; (Skin sensitization)-	No data available
5 Germ cell mutagenicity	Classification not possible	-	-	-	Classification not possible due to lack of data

6	Carcinogenicity	Classification not possible	-	-	-	Classification not possible due to lack of data and reports
7	Toxic to reproduction	Category 1A	Health hazard	Danger	May damage fertility or the unborn child	Congenital malformation was produced in 25 persons of 226 pregnant women which was taking Lithium for the purpose of medical treatment. It was classified into category 1A based on the description that Lithium was contraindications for the woman with possible pregnancy (ACGIH (2001)).
8	Specific target organs/systemic toxicity following single exposure	Category 1 (respiratory); Category 2 (nervous system)	Health hazard	Danger; Warning	Cause damage to organs (respiratory); May cause damage to organs (nervous system)	Classified into Category 1 (respiratory system) based on the description (ACGIH (2001), HSDB (2005), ICSC(J) (200)) that its dust exposure induces stimuli in nose, and throat, and strong stimuli in pharynx, and bronchus, pulmonary edema, and into Category 2 (nervous system) based on the description (HSDB (2005)) that its accidental ingestion showed nausea, muscle contraction, mental confusion, blurred vision and coma, which is priority 2.
9	Specific target organs/systemic toxicity following repeated exposure	Classification not possible	-	-	-	Classification not possible due to lack of data
10	Aspiration hazard	Classification not possible	-	-	-	No data available

Environmental Hazards

Hazard class	Classification	symbol	signal word	hazard statement	Rational for the classification
11 Hazardous to the aquatic environment (acute)	Classification not possible	-	-	-	No data available
11 Hazardous to the aquatic environment (chronic)	Classification not possible	-	-	-	No data available.