

## MATERIAL SAFETY DATA SHEET

### Lithium Chloride Reference Electrolyte In Ethylene Glycol (EC-RE-015)

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#### GENERAL INFORMATION

PRODUCT NAME:	1.0M LiCl reference electrolyte
MANUFACTURE'S NAME:	Eutech Instrument PTE LTD
DISTRIBUTED BY:	Eutech Instrument PTE LTD
CHEMICAL NAME:	Lithium Chloride in Ethylene Glycol
CHEMICAL FAMILY:	Complex Solution

#### INGREDIENTS

CAS NO: Lithium Chloride	12125-02-9
CAS NO: Ethylene Glycol	107-21-1
% of : LiCl	4.24%
% of HOCH <sub>2</sub> CH <sub>2</sub> OH	95.76%
OSHA/PEL:	125 mg/cm <sup>3</sup>
ACGIH/TLV:	100 mg/cm <sup>3</sup>
LD50(mg/kg) oral-rat of: LiCl	4 700 mg/kg

#### PHYSICAL DATA

Appearance & Odor:	Liquid, Colorless & Odorless
Physical State:	Liquid
Boiling Point:	197.6°C
Vapour Pressure (mmHg):	0.6 mmHg @ 20°C; 0.092 mmHg @ 25°C
Freezing Point:	NA
Vapour Density:	2.14 (Air = 1)
Specific Gravity:	1.1088 (Water = 1)
Solubility:	NA
pH:	NA

## FIRE AND EXPLOSION HAZARD DATA

Flash Point:	CLOSED CUP: 111 <sup>o</sup> C
Auto ignition Temperature:	398 <sup>o</sup> C
Fire Extinguishing Media:	Small fire: use DRY chemical powder Large Fire: use water spray, fog or foam. DO NOT use water jet
Special Fire-fighting procedures:	Explosive decomposition may occur if combined with strong acids or strong bases and subjected to elevated
Unusual Fire and Explosion Hazards:	Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

## HEALTH HAZARD DATA

Effects of Overexposure:	NA
Skin :	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used
Eyes	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15mins. Cold water may be used. Get medical attention if irritation occurs..
Ingestion/Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband.
Serious Ingestion	Medical conditions Aggravated by Exposure: Persons with pre-existing kidney, respiratory, eye, or neurological problems might be more sensitive to Ethylene Glycol. Notes to Physician: 1. Support vital functions, correct for dehydration and shock, and manage fluid balance. 2. The currently recommended medical management of Ethylene Glycol and metabolites. Elimination of Ethylene Glycol may be achieved by the following methods: a. Emptying the stomach by gastric lavage. It is useful if initiated within < 1 of ingestion. b. Correct metabolic acidosis with intravenous administration of sodium bicarbonate, adjusting the administration rate according to repeated and frequent measurement of acid/base status. c. Administer ethanol (orally or by IV (intravenously)) or fomepizole (4-methylpyrazole or Antizol)) therapy by IV as an antidote to inhibit the oramation of toxic metabolite d. If patients are diagnosed and treated early in the course with the above methods, hemodialysis may be avoided if fomepizole or ethanol therapy is effective and has corrected the metabolic acidosis, and no renal failure is present. However, once severe acidosis and real failure occurred,

	however, hemodialysis is necessary. It is effective in removing Ethylene Glycol and toxic metabolite, and correcting metabolic acidosis.
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#### REACTIVITY DATA

Stability:	Stable
Condition to avoid:	Excess heat, incompatible materials
Incompatibles:	Reactive with oxidizing agents, acids, alkalis
Special remarks on reactivity	Hygroscopic. Absorbs moisture from air. Avoid contamination with materials with hydroxyl compounds. Also incompatible with aliphatic amines, isocyanates, chlorosulfonic acid, and oleum
Hazardous polymerization:	Will not occur

#### SPILL AND DISPOSAL PROCEDURES

Steps to be taken in the events of a spill or discharge:	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements
Disposal procedure:	Dispose in accordance with all applicable federal, state and local environmental regulations
Ventilation:	None
Respiratory protection:	Approved vapor respirator
Eye/Skin protection:	Splash glasses / Lab coat

#### STORAGE AND HANDLING PRECAUTIONS

Storage requirements:	Keep container tightly closed. Keep in cool well-ventilated area. Hygroscopic
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#### TRANSPORTATION DATA AND ADDITIONAL INFORMATION

##### Domestic (D.O.T.)

Proper shipping name:	N/A (Not Regulated for Shipping)
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##### International (I.M.O.)

Proper shipping name:	N/A (Not Regulated for Shipping)
Marine pollutants:	Acid

##### Air (I.C.A.O.)

Proper shipping name:	N/A (Not Regulated for Shipping)
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