

MATERIAL SAFETY DATA SHEET
EC-RE-016
(Lithium Chloride Reference Electrolyte)

 Last updated on 3rd September 2008

EUTECH INSTRUMENTS PTE LTD.

Blk 55, Ayer Rajah Crescent, #04-16/24, Singapore 139949

Tel: (65) 6778 6876, Fax: (65) 6773 0836

 Website: <http://www.eutechinst.com>

 E-mail: eutech@thermofisher.com

This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability, or fitness for any particular use, or any other warranty, express or implied, with respect to this information, and we assume no liability resulting from the use of this information. Users should make their own investigations to determine the suitability of the information for their particular needs and purposes.

GENERAL INFORMATION

PRODUCT NAME:	EC-RE-016
MANUFACTURE'S NAME:	Eutech Instrument PTE LTD
DISTRIBUTED BY:	Eutech Instrument PTE LTD
CHEMICAL NAME:	Lithium Chloride in Acetic Acid
CHEMICAL FAMILY:	Complex Solution

INGREDIENTS

CAS NO: Lithium Chloride	12125-02-9
CAS NO: Acetic Acid	64-19-7
% of : LiCl	4.24%
% of Acetic Acid	95.76%
OSHA/PEL:	25 mg/cm ³
ACGIH/TLV:	15 ppm
LD50(mg/kg) oral-rat of: LiCl	4 3310mg/kg

PHYSICAL DATA

Appearance & Odor:	Liquid, Colorless & Pungent, vinegar-like, sour (strong)
Physical State:	Liquid
Boiling Point:	Lowest known value is 100 ^o C . Average weighted: 116.29 ^o C
Vapour Pressure	Highest known value is 2.3kPa (@ 20 ^o C). Average weighted: 1.58kPa (Air = 1)
Freezing Point:	NA
Vapour Density:	Highest known value is 2.07 (Air=1) Average weighted: 1.92 (Air=1)
Specific Gravity:	105 (Water = 1)
Solubility:	NA
pH:	Acidic

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Lowest known value is CLOSED CUP: 39°C. OPEN CUP: 43°C
Auto ignition Temperature:	463°C
Fire Extinguishing Media:	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Special Fire-fighting procedures:	Reacts with metals to produces flammable hydrogen gas. It will ignite on contact with potassium-tert-butoxide. A mixture of ammonium nitrate and acetic acid ignites when warmed, especially if warmed.
Unusual Fire and Explosion Hazards:	Acetic acid vapors may foam explosive mixtures with air. Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide and acetic acid is very violent, sometimes explosive. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110 degree C Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive.

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

	<p>acid/base status.</p> <p>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</p> <p>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 I removing Ethylene Glycol and toxic metabolite, and correcting metabolic acidosis.</p>
--	--

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, potassium hydroxide, sodium hydroxide, phosphorus isocyanate, ethylenediamine, thylene imine.
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. If necessary: Neutralize the residue with a dilute solution of sodium carbonate
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:	Store on segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready to use. Avoid all possible sources of ignition (spark or flame). Do not store above 24 ⁰ C
-----------------------	---

TRANSPORTATION DATA AND ADDITIONAL INFORMATION**Domestic (D.O.T.)**

Proper shipping name:	Class 8: Corrosive material Class 3: Flammable liquid
-----------------------	--

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)
-----------------------	----------------------------------

Copyright © 2008 Eutech Instruments Pte Ltd. eutech@thermofisher.com