

L-391

World Headquarters  
Hach Company  
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(970) 669-3050

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Date Printed 11/4/15  
MSDS No: M02740

## SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** 5044 Reference Electrode Electrolyte Solution  
**Catalog Number:** LZW5044.97.0002

Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

Emergency Telephone Numbers:  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(515)232-2533 8am - 4pm CST

**MSDS Number:** M02740  
**Chemical Name:** Not Applicable  
**CAS Number:** Not applicable  
**Additional CAS No. (for hydrated forms):** Not applicable  
**Chemical Formula:** Not Applicable  
**Chemical Family:** Inorganic Salt  
**Intended Use:** Laboratory Reagent

### 2. HAZARDS IDENTIFICATION

This mixture is not classified as hazardous per GHS (UN publication ST/SG/AC.10/36/Add.3)

**GHS Classification:**

**Hazard categories:** Not applicable

**GHS Label Elements:**

Not applicable

**Hazard statements:** Not applicable

**Precautionary statements:** Not applicable

**HMIS:**

**Health:** 0

**Flammability:** 0

**Reactivity:** 0

**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**

**Health:** 0

**Flammability:** 0

**Reactivity:** 0

**Symbol:** Not applicable

**WHMIS Hazard Classification:** Not applicable

**WHMIS Symbols:** Not applicable

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous Components according to GHS:** No

**Demineralized Water**

**CAS Number:** 7732-18-5

**Chemical Formula:** H<sub>2</sub>O

**GHS Classification:** Not a dangerous substance according to GHS.

**Percent Range (Trade Secret):** 90.0 - 100.0

**Percent Range Units:** weight / weight

**PEL:** Not established

**TLV:** Not established

**WHMIS Symbols:** Not applicable  
**LITHIUM ACETATE DIHYDRATE**

**CAS Number:** 546-89-4 (anhydrous)  
**Chemical Formula:**  $\text{LiC}_2\text{H}_3\text{O}_2 \cdot 2\text{H}_2\text{O}$   
**GHS Classification:** Non-hazardous  
**Percent Range (Trade Secret):** <1.5  
**Percent Range Units:** weight / weight  
**PEL:** 5 mg/m<sup>3</sup> Respirable Fraction; 15 mg/m<sup>3</sup> Total Dust  
**TLV:** 3 mg/m<sup>3</sup>, Respirable Particles; 10 mg/m<sup>3</sup> Inhalable Particles

**WHMIS Symbols:** Not applicable

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#### 4. FIRST AID MEASURES

**General Information:** In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.  
**Advice to doctor:** Treat symptomatically.  
**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.  
**Skin Contact (First Aid):** Wash skin with plenty of water for 15 minutes.  
**Inhalation:** Remove to fresh air.  
**Ingestion (First Aid):** If you feel unwell, contact a physician.

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#### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material will not burn. Material is not classified as flammable according to GHS criteria.  
**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.  
**Extinguishing Media:** Use media appropriate to surrounding fire conditions  
**Extinguishing Media NOT To Be Used:** Not applicable  
**Fire / Explosion Hazards:** None reported  
**Hazardous Combustion Products:** This material will not burn.

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#### 6. ACCIDENTAL RELEASE MEASURES

**Spill Response Notice:**  
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.  
**Containment Technique:** Stop spilled material from being released to the environment.  
**Clean-up Technique:** If permitted by regulation, Flush the spilled material to the drain with a large excess of water. Otherwise, Dispose of in accordance with local, state and federal regulations or laws. Decontaminate the area of the spill with a soap solution.  
**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.  
**DOT Emergency Response Guide Number:** Not applicable

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#### 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin clothing Maintain general industrial hygiene practices when using this product. Wash thoroughly after handling.  
**Storage:** Keep container tightly closed when not in use.  
**Flammability Class:** Not applicable

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#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin Protection:** lab coat disposable latex gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes Wash thoroughly after handling.

**TLV:** Not determined

**PEL:** Not determined

**For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:**

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Molecular Weight:** Not Applicable

**Odor:** None

**Odor Threshold:** Not Applicable

**pH:** 7.5 to 8.5

**Metal Corrosivity:**

**Corrosivity Classification:** Not classified as corrosive to metals according to GHS criteria.

**Steel:** Not Determined

**Aluminum:** Not Determined

**Specific Gravity/ Relative Density (water = 1; air =1):** Approximately 1

**Viscosity:** Not Determined

**Solubility:**

**Water:** Completely soluble

**Acid:** Not determined

**Other:** Not determined

**Partition Coefficient (n-octanol / water):** Not determined

**Coefficient of Water / Oil:** Not determined

**Melting Point:** Not applicable

**Decomposition Temperature:** Not Determined

**Boiling Point:** Not determined

**Vapor Pressure:** Not Applicable

**Vapor Density (air = 1):** Not determined

**Evaporation Rate (water = 1):** Not determined

**Volatile Organic Compounds Content:** Not determined

**Flammable Properties:** Material will not burn. Material is not classified as flammable according to GHS criteria.

**Flash Point:** Not applicable

**Method:** Not applicable

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Autoignition Temperature:** Not applicable

**Explosive Properties:**

Not classified according to GHS criteria.

**Oxidizing Properties:**

Not classified according to GHS criteria.

**Reactivity Properties:**

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

**Gas under Pressure:**

Not classified according to GHS criteria.

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## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Mechanical Impact:** None reported  
**Static Discharge:** None reported.  
**Reactivity / Incompatibility:** Incompatible with: bromine trifluoride  
**Hazardous Decomposition:** Heating to decomposition releases: chlorine  
**Conditions to Avoid:** Extreme temperatures

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## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No health effects are anticipated in normal use.  
**Toxicologically Synergistic Products:** None reported  
**Acute Toxicity:** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Single Exposure (STOT-SE):** Based on classification principles, the classification criteria are not met.  
**Specific Target Organ Toxicity - Repeat Exposure (STOT-RE):** Based on classification principles, the classification criteria are not met.  
**Skin Corrosion/Irritation:** Based on classification principles, the classification criteria are not met.  
**Eye Damage:** Based on classification principles, the classification criteria are not met.  
**Sensitization:** Based on classification principles, the classification criteria are not met.  
**CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction):** No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found. Data insufficient for classification  
IARC Listed: No  
NTP Listed: No  
O.S.H.A. Listed: No  
**Symptoms/Effects:**  
**Ingestion:** May cause: vomiting dehydration diarrhea muscular twitching somnolence ringing in the ears (tinnitus) confusion  
**Inhalation:** No data reported.  
**Skin Absorption:** No effects anticipated  
**Chronic Effects:** None reported  
**Medical Conditions Aggravated:** Pre-existing: Eye conditions Skin conditions Kidney conditions

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:**  
No ecological data available for this product. Based on classification principles, not classified as hazardous to the environment.  
**Ingredient Ecological Information:**  
CEPA estimate for lithium acetate; Persistent and inherently toxic to aquatic organisms.

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## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable  
**Special Instructions (Disposal):** Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.  
**Empty Containers:** Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.  
**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

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## 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated  
**Hazard Class:** NA  
**Subsidiary Risk:** NA  
**ID Number:** NA  
**Packing Group:** NA

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated  
**Hazard Class:** NA  
**Subsidiary Risk:** NA  
**UN Number/PIN:** NA  
**Packing Group:** NA

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Not Currently Regulated  
**Hazard Class:** NA  
**Subsidiary Risk:** NA  
**ID Number:** NA  
**Packing Group:** NA

**I.M.O.:**

**Proper Shipping Name:** Not Currently Regulated  
**Hazard Class:** NA  
**Subsidiary Risk:** NA  
**ID Number:** NA  
**Packing Group:** NA  
**Marine Pollutant:**

**Additional Information:** There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

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## 15. REGULATORY INFORMATION

**U.S. Federal Regulations:**

**O.S.H.A.:** This product does not meet the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

**E.P.A.:**

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** This product is not hazardous under 29 CFR.1910.1200 and therefore is not covered by Title III under SARA.

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

**302 (EHS) TPQ (40 CFR 355):** Not applicable

**304 CERCLA RQ (40 CFR 302.4):** Not applicable

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** Not applicable

**RCRA:** Contains no RCRA regulated substances.

**State Regulations:**

**California Prop. 65:** No Prop. 65 listed chemicals are present in this product.

**Identification of Prop. 65 Ingredient(s):** None

**California Perchlorate Rule CCR Title 22 Chap 33:** Not applicable

**Trade Secret Registry:** Not applicable

**National Inventories:**

**U.S. Inventory Status:** All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

**CAS Number:** Not applicable

**Canadian Inventory Status:** All ingredients of this product are DSL/NDSL Listed.

**EEC Inventory Status:** All ingredients used to make this product are listed on EINECS / ELINCS.

**Australian Inventory (AICS) Status:** All ingredients are listed.

**New Zealand Inventory (NZIoC) Status:** All components either listed or exempt.

**Korean Inventory (KECI) Status:** All components of this product are either listed, listed as the anhydrous compound or exempt.

**Japan (ENCS) Inventory Status:** All components either listed or exempt.

**China (PRC) Inventory (MEP) Status:** All components either listed or exempt.

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## 16. OTHER INFORMATION

**References:** Vendor Information. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Canada Gazette Vol. 141, No. 25 June 23, 2007: Screening Assessment of subsection 77(1) substances of the Canadian Environmental Protection Act (CEPA)

**Complete Text of H phrases referred to in Section 3:** Not applicable

**Revision Summary:** New MSDS Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

**Date of MSDS Preparation:**

**Day:** 29

**Month:** October

**Year:** 2014

**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350

**CCOHS Evaluation Note:** It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17.

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### Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**