

# SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Electrode Cleaning Solution  
**Catalog Number:** 2965249

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:** M02691  
**Chemical Name:** Not applicable  
**CAS Number:** Not applicable  
**Additional CAS No. (for hydrated forms):** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**Intended Use:** Water Analysis

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## 2. HAZARDS IDENTIFICATION

**GHS Classification:**

**Hazard categories:** Hazardous to the Aquatic Environment: Aquatic Acute 2 Serious Eye Damage/Eye Irritation: Eye Dam. 1

**GHS Label Elements:**

DANGER



**Hazard statements:** Causes serious eye damage.

**Precautionary statements:** Wear protective gloves / protective clothing / eye protection / face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**HMIS:**

**Health:** 1

**Flammability:** 0

**Reactivity:** 0

**Protective Equipment:** A - Safety Glasses

**NFPA:**

**Health:** 1

**Flammability:** 0

**Reactivity:** 0

**Symbol:** Not applicable

**WHMIS Hazard Classification:** Class D, Division 2, Subdivision B - Toxic material (other toxic effects)

**WHMIS Symbols:** Corrosive

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## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous Components according to GHS:**

**Sodium Hypochlorite**

**CAS Number:** 7681-52-9

**Chemical Formula:** NaOCl  
**GHS Classification:** Skin Corr. 1B, H314; Aquatic Acute 1, H400  
**Percent Range (Trade Secret):** < 0.5  
**Percent Range Units:** weight / weight  
**PEL:** Not established  
**TLV:** Not established (0.5 ppm as chlorine)

**WHMIS Symbols:** Corrosive

**Potassium Hydroxide**

**CAS Number:** 1310-58-3  
**Chemical Formula:** KOH  
**GHS Classification:** Acute Tox. 4 - Orl, H302; Skin Corr. 1A, H314; Met Corr. 1, H290; Aquatic Acute 3, H402  
**Percent Range (Trade Secret):** < 0.5  
**Percent Range Units:** weight / weight  
**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust  
**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Corrosive Acute Poison

**Potassium Pyrophosphate**

**CAS Number:** 7320-34-5  
**Chemical Formula:** K<sub>4</sub>P<sub>2</sub>O<sub>7</sub>  
**GHS Classification:** Eye Irrit. 2, H319  
**Percent Range (Trade Secret):** 0.3-1.5  
**Percent Range Units:** weight / weight  
**PEL:** Not established  
**TLV:** Not established

**WHMIS Symbols:** Other Toxic Effects

**Magnesium Nitrate Hexahydrate**

**CAS Number:** 10377-60-3  
**Chemical Formula:** Mg(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O  
**GHS Classification:** Ox. Sol. 3, H272; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT Single 3, H335  
**Percent Range (Trade Secret):** < 0.01  
**Percent Range Units:** weight / weight  
**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust  
**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Oxidizing

**5-Chloro-2-methyl-2H-isothiazol-3-one**

**CAS Number:** 26172-55-4  
**Chemical Formula:** C<sub>4</sub>H<sub>4</sub>ClNOS  
**GHS Classification:** Acute Tox. 4, H302; Skin Corr. 1B, H314; Resp. Sens. 1, H317; Skin Sens. 1, H334; Aquatic Acute 1, H400  
**Percent Range (Trade Secret):** < 0.001  
**Percent Range Units:** weight / weight  
**PEL:** Not established  
**TLV:** Not established

**WHMIS Symbols:** Corrosive Other Toxic Effects

**Copper Nitrate**

**CAS Number:** 3251-23-8  
**Chemical Formula:** Cu(NO<sub>3</sub>)<sub>2</sub>  
**GHS Classification:** Ox. Sol. 2, H272; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Chronic 1, H410

**Percent Range (Trade Secret):** < 0.0001  
**Percent Range Units:** weight / weight  
**PEL:** 1 mg/m<sup>3</sup> (Cu)  
**TLV:** 1 mg/m<sup>3</sup> (Cu)

**WHMIS Symbols:** Other Toxic Effects

**2-Methyl-2H-isothiazol-3-one**

**CAS Number:** 2682-20-4  
**Chemical Formula:** C4H5NOS  
**GHS Classification:** Acute Tox. 4-Orl., H302; Acute Tox. 3-Inh., H331; Skin Corr. 1B, H314; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Acute 1, H4002682-20-4  
**Percent Range (Trade Secret):** < 0.0001  
**Percent Range Units:** weight / weight  
**PEL:** Not determined  
**TLV:** Not established

**WHMIS Symbols:** CorrosiveOther Toxic Effects

**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):** >98  
**Percent Range Units:** weight / weight  
**PEL:** Not established  
**TLV:** Not established

**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 soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing.

**Inhalation:** Remove to fresh air.

**Ingestion (First Aid):** Give 1-2 glasses of water. Never give anything by mouth to an unconscious person. Call physician immediately.

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#### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material will not burn.

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

**Extinguishing Media:** Water.

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire / Explosion Hazards:** None reported

**Hazardous Combustion Products:** Not applicable

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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:** Absorb spilled liquid with non-reactive sorbent material. Place material in a plastic bag. Decontaminate the area of the spill with a weak acid solution. Dispose of in accordance with local, state and federal regulations or laws.

**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.

**Storage:** Keep this product in its original container when not in use. Store in a cool, dry, well-ventilated place. Keep this product and all other chemicals out of children's reach.

**Flammability Class:** Not applicable

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Have an eyewash station nearby. Have a safety shower nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

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

**Skin Protection:** Not applicable

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin clothing

**TLV:** None established

**PEL:** None established

**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:** Odorless

**pH:** 12.2

**Metal Corrosivity:**

**Corrosivity Classification:** Classified as corrosive to eyes due to extreme pH rule. Not additionally classed as corrosive to metals.

**Steel:** Not determined

**Aluminum:** Not determined

**Specific Gravity/ Relative Density (water = 1; air =1):** Not determined

**Viscosity:** Not determined

**Solubility:**

**Water:** Miscible

**Acid:** Reacts with acids

**Other:** Not determined

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

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

**Melting Point:** Not applicable

**Decomposition Temperature:** Not determined

**Boiling Point:** Not determined

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined  
**Evaporation Rate (water = 1):** Not determined  
**Volatile Organic Compounds Content:** Not applicable  
**Flammable Properties:** Material will not burn.  
**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:** Other pool/spa chemicals in their concentrated forms. oxidizers acids  
**Hazardous Decomposition:** None reported  
**Conditions to Avoid:** Excessive heat Poor Ventilation Contamination

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## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information available for mixture.  
**Toxicologically Synergistic Products:** None reported  
**Acute Toxicity:** Based on classification principles, the classification criteria are not met. Acute Toxicity Estimate (ATE)  
- Calculated from Ingredient Toxicity Data  
ATE (mix) Oral LD50 = 68004 mg/Kg  
**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:** Corrosive to eyes. Assessment based on pH  
**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.  
This product does NOT contain any IARC listed chemicals.  
This product does NOT contain any NTP listed chemicals.  
This product does NOT contain any OSHA listed carcinogens.  
**Symptoms/Effects:**  
**Ingestion:** May be harmful if swallowed  
**Inhalation:** No effects anticipated  
**Skin Absorption:** None Reported  
**Chronic Effects:** None reported  
**Medical Conditions Aggravated:** Pre-existing: Skin conditions

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information: --**

No ecological data available for this product. Do not place in landfill. Recycle appropriately. Do not release into the environment.

**Ingredient Ecological Information:** Copper Nitrate: LC50 Pimephales promelas 96h = 0.015 mg/l; LC50 Ceriodaphnia dubia 48h = 0.0095 mg/l; EC50 Nitschia closterium 96h = 0.033 mg/l;

Sodium Hypochlorite: 96 hr Clupea pallasii LC50 = 0.065 mg/L; 48 hr Daphnia magna LC50 = 0.032 mg/L; 96 hr Gracilaria tenuistipitata ErC50 = 46 mg/L;

CEPA Statements: Water, Potassium Hydroxide, Magnesium Nitrate, Potassium Pyrophosphate: Persistent. Not bioaccumulative. Not inherently toxic to aquatic organisms. Copper Nitrate: Persistent. Not bioaccumulative. Inherently toxic to aquatic organisms

Sodium Hypochlorite: Not persistent. Not bioaccumulative. Inherently toxic to aquatic organisms.

5-Chloro-2-methyl-2H-isothiazol-3-one, 2-Methyl-2H-isothiazol-3-one: Not persistent. Not bioaccumulative. Not inherently toxic to aquatic organisms.

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### 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable

**Special Instructions (Disposal):** Dispose of material in an E.P.A. approved hazardous waste facility.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

**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

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**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

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**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

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**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**I.M.O.:**

**Proper Shipping Name:** Not Currently Regulated

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**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 meets 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):** Immediate (Acute) Health Hazard

**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.

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

**304 CERCLA RQ (40 CFR 302.4):** Potassium hydroxide 1000 lbs. Sodium Hypochlorite 100 lbs. Copper Compounds

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

**Clean Water Act (40 CFR 116.4):** Potassium hydroxide - RQ 1000 lbs. Sodium hypochlorite - RQ 100 lbs

**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:** Not determined

**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:** TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. Outside Testing. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

**Complete Text of H phrases referred to in Section 3:** H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.

**Revision Summary:** 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:** 02

**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. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

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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.**

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