



**Be Right™**

# SAFETY DATA SHEET

Issue Date 25-Mar-2021

Revision Date 22-Mar-2023

Version 3.3

Page 1 / 18

## 1. IDENTIFICATION

### Product identifier

**Product Name** Electrode Cleaning Solution

### Other means of identification

**Product Code(s)** 2965249

**Safety data sheet number** M02691

**UN/ID no** UN1814

### Recommended use of the chemical and restrictions on use

**Recommended Use** Cleaning solution. Water Analysis.

**Uses advised against** Consumer use.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Chronic aquatic toxicity	Category 3

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### **Signal word**

Danger



#### Hazard statements

H314 - Causes severe skin burns and eye damage  
H412 - Harmful to aquatic life with long lasting effects

#### Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician  
P363 - Wash contaminated clothing before reuse  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P273 - Avoid release to the environment

#### Other Hazards Known

Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

Chemical Family Mixture.  
Chemical nature Aqueous solution of inorganic salts.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
Potassium hydroxide	1310-58-3	<1%	-
Sodium hypochlorite	7681-52-9	<1%	-
Magnesium nitrate	10377-60-3	<0.01%	-
3(2H)-Isothiazolone, 5-chloro-2-methyl-	26172-55-4	<0.01%	-
Magnesium chloride	7786-30-3	<0.01%	-
3(2H)-Isothiazolone, 2-methyl-	2682-20-4	<0.01%	-

### 4. FIRST AID MEASURES

#### Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

**5. FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	Caution: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
<b>Hazardous combustion products</b>	This material will not burn.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. ACCIDENTAL RELEASE MEASURES**

**U.S. 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. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe

areas. Keep people away from and upwind of spill/leak.

**Other Information**

Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

**Methods for containment**

Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections**

See section 8 for more information. See section 13 for more information.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

**Flammability class**

Not applicable

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Potassium hydroxide CAS#: 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection**

Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed

areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

<b>Eye/face protection</b>	Face protection shield.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Avoid contact with eyes, skin and clothing.
<b>General Hygiene Considerations</b>	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.
<b>Environmental exposure controls</b>	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.
<b>Thermal hazards</b>	None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Color</b>	colorless
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	Not applicable
<b>Odor</b>	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	12.2	@ 20 °C
<b>Melting point / freezing point</b>	~ 0 °C / 32 °F	
<b>Initial boiling point and boiling range</b>	~ 100 °C / 212 °F	
<b>Evaporation rate</b>	1.01 (water = 1)	
<b>Vapor pressure</b>	23.702 mm Hg / 3.16 kPa at 25 °C / 77 °F	
<b>Relative vapor density</b>	0.62	
<b>Specific Gravity</b>	1	
<b>Partition coefficient</b>	No data available	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	No data available	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data available	

### Solubility(ies)

#### Water solubility

**Product Code(s)** 2965249  
**Issue Date** 25-Mar-2021  
**Version** 3.3

**Product Name** Electrode Cleaning Solution  
**Revision Date** 22-Mar-2023  
**Page** 6 / 18

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

#### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Violent reaction will occur	No data available	No information available

#### Other information

##### Metal Corrosivity

**Steel Corrosion Rate** No data available  
**Aluminum Corrosion Rate** No data available

##### Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Potassium hydroxide	1310-58-3	No data available	-
Sodium hypochlorite	7681-52-9	Not applicable	-
Magnesium nitrate	10377-60-3	No data available	-
3(2H)-Isothiazolone, 5-chloro-2-methyl-	26172-55-4	No data available	-
Magnesium chloride	7786-30-3	No data available	-
3(2H)-Isothiazolone, 2-methyl-	2682-20-4	No data available	-

##### Explosive properties

**Upper explosion limit** Not applicable  
**Lower explosion limit** Not applicable

##### Flammable properties

**Flash point** No data available

##### Flammability Limit in Air

**Upper flammability limit:** No data available  
**Lower flammability limit:** No data available

##### Oxidizing properties

No data available.

##### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None.  
**Sensitivity to Static Discharge** None.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

Exposure to air or moisture over prolonged periods.

**Incompatible materials**

Acids. Bases. Oxidizing agent.

**Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

**Inhalation**

Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

**Eye contact**

Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact**

Corrosive. Causes severe burns. Avoid contact with skin and clothing.

**Ingestion**

Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms**

Redness. Burning. May cause blindness. Coughing and/ or wheezing.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium hydroxide (<1%) CAS#: 1310-58-3	Rat LD <sub>50</sub>	333 mg/kg	None reported	None reported	Vendor SDS
Magnesium nitrate (<0.01%) CAS#: 10377-60-3	Rat LD <sub>50</sub>	5440 mg/kg	None reported	None reported	IUCLID
3(2H)-Isothiazolone,	Rat	481 mg/kg	None reported	None reported	IUCLID

5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	LD <sub>50</sub>				
Magnesium chloride (<0.01%) CAS#: 7786-30-3	Rat LD <sub>50</sub>	2800 mg/kg	None reported	None reported	Vendor SDS
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	LD <sub>50</sub> Rat	249 mg/kg	None reported	None reported	LOLI

**Dermal Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	LD <sub>50</sub> Rabbit	200 mg/kg	None reported	None reported	LOLI

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	LC <sub>50</sub> Rat	0.11 mg/L	None reported	None reported	LOLI

**Unknown Acute Toxicity**

3E-05% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

<b>ATE<sub>mix</sub> (oral)</b>	No information available
<b>ATE<sub>mix</sub> (dermal)</b>	No information available
<b>ATE<sub>mix</sub> (inhalation-dust/mist)</b>	No information available
<b>ATE<sub>mix</sub> (inhalation-vapor)</b>	No information available
<b>ATE<sub>mix</sub> (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Causes severe burns.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide (<1%) CAS#: 1310-58-3	Standard Draize Test	Human	50 mg	24 hours	Corrosive to skin	RTECS
Magnesium nitrate (<0.01%) CAS#: 10377-60-3	Standard Draize Test	Rabbit	500 mg	24 hours	Skin irritant	HSDB
3(2H)-Isothiazolone,	OECD Test 404:	Rabbit	None reported	None reported	Corrosive to skin	OECD 429: Skin



**Product Code(s)** 2965249  
**Issue Date** 25-Mar-2021  
**Version** 3.3

**Product Name** Electrode Cleaning Solution  
**Revision Date** 22-Mar-2023  
**Page** 9 / 18

5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	Acute Dermal Corrosion/Irritation					Sensitization: Local Lymph Node Assay
--	--------------------------------------	--	--	--	--	--

**Serious eye damage/irritation**

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide (<1%) CAS#: 1310-58-3	Existing human experience	Human	None reported	None reported	Corrosive to eyes	ERMA
Magnesium nitrate (<0.01%) CAS#: 10377-60-3	Standard Draize Test	Rabbit	500 mg	24 hours	Eye irritant	HSDB
3(2H)-Isothiazolone, 5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	None reported	None reported	Eye irritant	ERMA OECD 429: Skin Sensitization: Local Lymph Node Assay
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	None reported	None reported	None reported	None reported		ECHA

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
Potassium hydroxide (<1%) CAS#: 1310-58-3	Intracutaneous Test	Guinea pig	Not confirmed to be a skin sensitizer	IUCLID
Sodium hypochlorite (<1%) CAS#: 7681-52-9	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	ECHA
3(2H)-Isothiazolone, 5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	OECD Test No. 406: Skin Sensitization	Guinea pig	Confirmed to be a skin sensitizer	IUCLID

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	Human TD <sub>Lo</sub>	1000 mg/kg	None reported	<b>Behavioral</b> Somnolence (general depressed activity) <b>Vascular</b> BP lowering not characterized in autonomic section <b>Skin and Appendages</b> Corrosive to skin after topical application	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	Rat TD <sub>Lo</sub>	140 mg/kg	63 days	<b>Endocrine</b> Changes in spleen weight <b>Immunological Including Allergic</b> Decrease in cellular immune response <b>Biochemical</b> Intermediary metabolism (lipids including transport)	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Potassium hydroxide	1310-58-3	-	-	-	-
Sodium hypochlorite	7681-52-9	-	Group 3	-	-
Magnesium nitrate	10377-60-3	-	Group 2A	-	X
3(2H)-Isothiazolone, 5-chloro-2-methyl-	26172-55-4	-	-	-	-
Magnesium chloride	7786-30-3	-	-	-	-
3(2H)-Isothiazolone, 2-methyl-	2682-20-4	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Group 3 - Not classifiable as a human carcinogen
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium hydroxide (<1%) CAS#: 1310-58-3	Cytogenetic analysis	Rat ascites tumor	1800 mg/kg	None reported	Positive test result for mutagenicity	RTECS
Sodium hypochlorite (<1%) CAS#: 7681-52-9	Cytogenetic analysis	Human lymphocyte	100 mg/L	24 hours	Positive test result for mutagenicity	RTECS
Magnesium chloride (<0.01%) CAS#: 7786-30-3	Cytogenetic analysis	Hamster lung	12000 mg/kg	None reported	Positive test result for mutagenicity	RTECS

**Mixture invivo Data**

No data available.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	Rat NOAEL	>= 5 mg/kg	Single generation	No reproductive or developmental toxic effects observed	ECHA

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Unknown aquatic toxicity**

3E-05% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium hydroxide (<1%) CAS#: 1310-58-3	96 hours	<i>Gambusia affinis</i>	LC <sub>50</sub>	80 mg/L	ERMA
Sodium hypochlorite (<1%) CAS#: 7681-52-9	96 hours	<i>Clupea pallasii</i>	LC <sub>50</sub>	0.065 mg/L	Vendor SDS
Magnesium nitrate (<0.01%) CAS#: 10377-60-3	96 hours	<i>Lepomis macrochirus</i>	LC <sub>50</sub>	9000 mg/L	ECHA
3(2H)-Isothiazolone, 5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	0.19 mg/L	EPA
Magnesium chloride (<0.01%) CAS#: 7786-30-3	96 hours	None reported	LC <sub>50</sub>	480 mg/L	Vendor SDS
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	96 hours	None reported	LC <sub>50</sub>	0.7 mg/L	ECOSARS

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	48 Hours	<i>Daphnia magna</i>	LC <sub>50</sub>	0.032 mg/L	Vendor SDS
Magnesium nitrate (<0.01%) CAS#: 10377-60-3	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	880 mg/L	ECHA
3(2H)-Isothiazolone, 5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	48 Hours	None reported	LC <sub>50</sub>	0.56 mg/L	EPA
Magnesium chloride (<0.01%) CAS#: 7786-30-3	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	140 mg/L	Vendor SDS
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	48 Hours	None reported	LC <sub>50</sub>	0.18 mg/L	ECOSARS

**Algae**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	72 Hours	<i>Pseudokirchnerella subcapitata</i>	EC <sub>50</sub>	0.05 mg/L	ECHA
Magnesium nitrate (<0.01%) CAS#: 10377-60-3	72 Hours	<i>Scenedesmus subspicatus</i>	EC <sub>50</sub>	> 100 mg/L	ECHA
3(2H)-Isothiazolone, 5-chloro-2-methyl- (<0.01%) CAS#: 26172-55-4	72 Hours	None reported	EC <sub>50</sub>	0.021 mg/L	EPA
Magnesium chloride (<0.01%) CAS#: 7786-30-3	72 Hours	<i>Desmodesmus subspicatus</i>	EC <sub>50</sub>	2200 mg/L	Vendor SDS
3(2H)-Isothiazolone, 2-methyl- (<0.01%) CAS#: 2682-20-4	96 hours	None reported	EC <sub>50</sub>	0.448 mg/L	ECOSARS

**Aquatic Chronic Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	28 days	<i>Menidia peninsulae</i>	NOEC	0.04 mg/L	ECHA

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	15 days	<i>Crassostrea virginica</i>	NOEC	0.007 mg/L	ECHA

**Algae**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hypochlorite (<1%) CAS#: 7681-52-9	7 days	None reported	NOEC	0.0021 mg/L	ECHA

**Persistence and degradability**

**Mixture**

No data available.

**Mixture**

No data available.

**Partition coefficient**

No data available

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

No data available

**Other adverse effects**  
No information available

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.
<b>US EPA Waste Number</b>	D002

**Special instructions for disposal** Dispose of material in an E.P.A. approved hazardous waste facility.

### 14. TRANSPORT INFORMATION

#### DOT

<b>UN/ID no</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide, solution
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	II
<b>Description</b>	UN1814, Potassium hydroxide, solution, 8, II
<b>Emergency Response Guide Number</b>	154

#### TDG

<b>UN/ID no</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide solution
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	II
<b>Description</b>	UN1814, Potassium hydroxide solution, 8, II

#### IATA

<b>UN number or ID number</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide solution
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	A3, A803

#### IMDG

<b>UN number or ID number</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide solution
<b>Transport hazard class(es)</b>	8
<b>Packing Group</b>	II
<b>EmS-No</b>	F-A, S-B

**Note:** No special precautions necessary.

#### **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 reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:  
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

### National Inventories

TSCA Complies  
 DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

### International Inventories

EINECS/ELINCS Complies  
 ENCS Complies  
 IECS Complies  
 KECL - Existing substances Complies  
 PICCS Complies  
 TCSI Complies  
 AICS Complies  
 NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECS - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 TCSI - Taiwan Chemical Substances Inventory  
 AICS - Australian Inventory of Chemical Substances  
 NZIoC - New Zealand Inventory of Chemicals

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Magnesium nitrate (CAS #: 10377-60-3)	1.0

#### SARA 311/312 Hazard Categories

Acute health hazard Yes  
 Chronic Health Hazard Yes  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydroxide 1310-58-3	1000 lb	-	-	X
Sodium hypochlorite 7681-52-9	100 lb	-	-	X

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Product Code(s) 2965249  
 Issue Date 25-Mar-2021  
 Version 3.3

Product Name Electrode Cleaning Solution  
 Revision Date 22-Mar-2023  
 Page 16 / 18

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Potassium hydroxide 1310-58-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ
Sodium hypochlorite 7681-52-9	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Potassium hydroxide 1310-58-3	X	X	X
Sodium hypochlorite 7681-52-9	X	X	X
Magnesium nitrate 10377-60-3	X	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
Potassium hydroxide	180.0910	21 CFR 184.1631
Sodium hypochlorite	180.0940	-
Magnesium nitrate	180.0920	-
3(2H)-Isothiazolone, 5-chloro-2-methyl-	180.0920	-
Magnesium chloride	180.0910	21 CFR 184.1426
3(2H)-Isothiazolone, 2-methyl-	180.0920	-

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
Magnesium nitrate 10377-60-3	Declarable Substance (FI)	1 % 0.1 %
3(2H)-Isothiazolone, 5-chloro-2-methyl- 26172-55-4	Prohibited Substance (LR)	None reported
Magnesium chloride 7786-30-3	Declarable Substance (FI)	1 % 0.1 %
3(2H)-Isothiazolone, 2-methyl- 2682-20-4	Declarable Substance (LR) Prohibited Substance (LR)	None reported

**NFPA and HMIS Classifications**



<b>NFPA</b>	<b>Health hazards - 3</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>	<b>Physical and chemical properties -</b>
<b>HMIS</b>	<b>Health hazards - 3</b>	<b>Flammability - 0</b>	<b>Physical hazards - 0</b>	<b>Personal protection -</b> X -1

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Product Code(s)** 2965249  
**Issue Date** 25-Mar-2021  
**Version** 3.3

**Product Name** Electrode Cleaning Solution  
**Revision Date** 22-Mar-2023  
**Page** 18 / 18

**Prepared By** Hach Product Compliance Department

**Issue Date** 25-Mar-2021

**Revision Date** 22-Mar-2023

**Revision Note** None

**Disclaimer**

**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.**

HACH COMPANY©2022

**End of Safety Data Sheet**