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

Date Printed 10/28/15
MSDS No: M00865

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Potassium Chloride Reference Electrolyte Cartridge
Catalog Number: 2546902

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: M00865
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Mixture
Intended Use: Laboratory Reagent Reference electrode solution

2. HAZARDS IDENTIFICATION

GHS Classification:
Hazard categories: . Serious Eye Damage/Eye Irritation: Eye Irrit. 2A
GHS Label Elements:
WARNING

Hazard statements: . Causes serious eye irritation.
Precautionary statements: Wear eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention.
HMIS:
Health: 1
Flammability: 1
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.
NFPA:
Health: 1
Flammability: 1
Reactivity: 0
Symbol: Not applicable
WHMIS Hazard Classification: Not applicable
WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:
Glycerin

CAS Number: 56-81-5
Chemical Formula: $C_3H_8O_3$

GHS Classification: Skin Irrit. 3, H316; Eye Irrit. 2A, H319
Percent Range (Trade Secret): 35.0 - 45.0
Percent Range Units: weight / weight
PEL: 15 mg/m^3 as inhalable fraction; 5 mg/m^3 as respirable fraction
TLV: 10 mg/m^3

WHMIS Symbols: Not applicable

Potassium Chloride

CAS Number: 7447-40-7
Chemical Formula: KCl
GHS Classification: Acute Tox. 5 -Orl, H303; Skin Irrit. 3, H316; Eye Irrit. 2, H319; Aquatic Acute 3, H402
Percent Range (Trade Secret): 5.0 - 15.0
Percent Range Units: weight / weight
PEL: 15 mg/m^3 as inhalable dust; 5 mg/m^3 as respirable dust
TLV: 10 mg/m^3 as inhalable dust; 3 mg/m^3 as respirable dust

WHMIS Symbols: Not applicable

Octylphenoxypolyethoxyethanol

CAS Number: 9036-19-5
Chemical Formula: $(C_2H_4O)_nC_{14}H_{22}O$
GHS Classification: Acute tox. 5 - Orl, H303; Eye Dam. 1, H318
Percent Range (Trade Secret): < 0.1
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Other Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5
Chemical Formula: H_2O
GHS Classification: Not a dangerous substance according to GHS.
Percent Range (Trade Secret): 40.0 - 50.0
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Not applicable

Hydroxyethyl Cellulose

CAS Number: 9004-62-0
Chemical Formula: $(CH_2OC_2H_5OH)_n$
GHS Classification: Non-hazardous
Percent Range (Trade Secret): <2
Percent Range Units: weight / weight
PEL: None established
TLV: None established

WHMIS Symbols: Not applicable

Silver Chloride

CAS Number: 7783-90-6
Chemical Formula: AgCl
GHS Classification: Non-hazardous
Percent Range (Trade Secret): < 0.1
Percent Range Units: weight / weight

PEL: 0.01 mg Ag/m^3
TLV: 0.01 mg Ag/m^3

WHMIS Symbols: Not applicable

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: Flush eyes with water. Call physician if irritation develops.
Skin Contact (First Aid): Wash skin with plenty of water for 15 minutes. Call physician if irritation develops. Remove contaminated clothing.
Inhalation: Remove to fresh air.
Ingestion (First Aid): Give large quantities of water. If you feel unwell, contact a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. May be combustible at high temperature. During a fire, corrosive and toxic gases may be generated by thermal decomposition.
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: May react violently with: strong acids strong bases strong oxidizers strong reducers bromine trifluoride
Hazardous Combustion Products: Toxic fumes of: acrolein carbon monoxide, carbon dioxide. chlorine potassium oxides

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. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.
Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.
Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Pick up spill for disposal and place in a closed container Decontaminate the area of the spill with a soap 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

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Store between 10° and 25°C. Keep away from: oxidizers Protect from: heat extreme temperatures combustible materials sparks, flames and other ignition sources
Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:
Eye Protection: safety glasses with top and side shields
Skin Protection: 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 skin Wash thoroughly after handling. Protect from: oxidizers heat combustible material sparks, flames and other ignition sources
TLV: Not established
PEL: Not established
For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless
Physical State: Gel
Molecular Weight: Not applicable
Odor: Odorless
Odor Threshold: Not applicable
pH: 6.16
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): 1.21
Viscosity: Not determined
Solubility:
Water: Miscible
Acid: Miscible
Other: Not determined
Partition Coefficient (n-octanol / water): Not determined
Coefficient of Water / Oil: Not determined
Melting Point: Not determined
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 determined
Flammable Properties: Material is not classified as flammable according to GHS criteria. May be combustible at high temperature. During a fire, corrosive and toxic gases may be generated by thermal decomposition.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not determined
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classifed 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.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: Incompatible with: oxidizers chromates perchlorates chlorates bromine trifluoride
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: acrolein carbon dioxide carbon monoxide potassium oxide chlorine
Conditions to Avoid: Extreme temperatures Heating to decomposition. Contact with heat, sparks, open flames or other ignition sources. Contact with oxidizers Contact with acid or acid fumes Excessive heat Incompatibles

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Practically Non-toxic 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. Summary of findings reported in the literature follow.
Potassium Chloride: Oral Human (Male) LDLo = 20 mg/kg/Cardiac arrythmias, nausea, vomiting and change in blood clotting factors; Oral Human (Male) TDLo = 214.29 mg/kg/Hypermorility, diarrhea, nausea and vomiting.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met. Summary of findings reported in the literature follow.
Potassium Chloride: Oral Rat TDLo = 75.6 g/kg/6 wk/Increased urine volume; Oral Rat TDLo = 938 g/kg/78 wk/Acute renal failure; Oral Rat TDLo = 1536 g/kg/130 wk/Adrenal cortex hyperplasia.
Skin Corrosion/Irritation: Mildly irritating to skin.
Eye Damage: Irritating to eyes.
Sensitization: Based on classification principles, the classification criteria are not met.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Based on classification principles, the classification criteria are not met. Summary of findings reported in the literature follow.
Potassium Chloride: Oral Rat Unscheduled DNA Synthesis - 1.5 mg/kg; Mouse Lymphocyte Mutation in Microorganism - 2048 mg/L; Human Leukocyte DNA Damage - 1 mmol/L/2 hr; Hamster Ovary Sister Chromatid Exchange - 180 mmol/L
Glycerin: DNA inhibition - Human Lymphocytes 200 mmol/L; Cytogenetic analysis - Oral Rat 1 g/kg; Oral Rat TDLo = 100 mg/kg/Male - one day pre-mating - post-implantation mortality; Octylphenoxypolyethoxyethanol: DNA Inhibition - Human Lymphocytes 5 ppm
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 cause: gastrointestinal tract irritation nausea vomiting diarrhea fever muscular weakness blood pressure problems cardiac depression
Inhalation: No effects anticipated
Skin Absorption: No effects anticipated
Chronic Effects: Chronic overexposure may cause kidney damage heart damage
Medical Conditions Aggravated: Pre-existing: Kidney conditions Liver conditions Cardiovascular diseases

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product. Mobility in soil: No data available Based on classification principles, not classified as hazardous to the environment.
Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 1
Ingredient Ecological Information: Potassium Chloride: 96 hr Gambusia affinis LC50 = 920 mg/L; 48 hr Daphnia magna EC50 = 83 mg/L; 96 hr Pimephales promelas LC50 = 880 mg/L; 7 days Pimephales promelas NOEC = 500 mg/L; Silver Chloride: 96 hr Pimephales promelas LC50 = 1.93 mg/L
CEPA statements: Glycerin and Hydroxyethyl Cellulose: Not persistent or bioaccumulative. Not inherently toxic to aquatic organisms. Silver Chloride: Persistent and inherently toxic to aquatic organisms. Potassium Chloride: Persistent. Not bioaccumulative.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D011
Special Instructions (Disposal): Dispose of material in an E.P.A. approved hazardous waste facility. Otherwise, Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.
Empty Containers: Working in a well-ventilated area, 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. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility.
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.

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.

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 contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

Silver Chloride

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

304 CERCLA RQ (40 CFR 302.4): Silver Compounds 1 lb.

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: WARNING - This product contains a chemical known to the State of California to cause cancer. WARNING - This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Identification of Prop. 65 Ingredient(s): Octylphenoxypolyethoxyethanol

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 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.

16. OTHER INFORMATION

References: Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information.

Complete Text of H phrases referred to in Section 3: H315 Causes skin irritation. H319 Causes serious eye irritation.

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: 24

Month: July

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).

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.