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

MSDS No: M00404

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Reference Electrode Filling Solution
Catalog Number: 2184726

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: M00404
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
UN Number/PIN: NA
Intended Use: Reference electrode solution
Date of MSDS Preparation:
Day: 07
Month: July
Year: 2014
MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

2. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, colorless liquid
Physical State: Liquid
Odor: Not determined
MAY CAUSE EYE AND SKIN IRRITATION
HMIS:
Health: 1
Flammability: 1
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.
Potential Health Effects:
Eye Contact: May cause irritiation
Skin Contact: May cause irritiation
Skin Absorption: No effects anticipated
Target Organs: Not applicable
Ingestion: May cause: gastrointestinal irritation nausea vomiting diarrhea muscular weakness blood pressure changes fever cardiac depression
Target Organs: Blood Heart
Inhalation: May cause: irritation of nose and throat
Target Organs: None reported
Medical Conditions Aggravated: Pre-existing: Kidney conditions Liver conditions
Chronic Effects: Chronic overexposure may cause kidney damage
Cancer / Reproductive Toxicity Information:
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported
WHMIS Hazard Classification: Not applicable

WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Glycerin
Percent Range: 35.0 - 45.0
Percent Range Units: weight / weight
CAS No.: 56-81-5
LD50: Oral Rat LD50 = 12600 mg/kg; Oral Mouse LD50 = 4090 mg/kg; Oral Rabbit LD50 = 27000 mg/kg; Oral Guinea Pig LD50 = 7750 mg/kg
LC50: None reported
TLV: 10 mg/m^3
PEL: 15 mg/m^3 as inhalable fraction; 5 mg/m^3 as respirable fraction
Ingredient WHMIS Symbol: Not applicable

Demineralized Water
Percent Range: 40.0 - 50.0
Percent Range Units: weight / weight
CAS No.: 7732-18-5
LD50: LD50 oral rat = >89,800 mg/kg
LC50: None reported
TLV: Not established
PEL: Not established
Ingredient WHMIS Symbol: Not applicable

Other component
Percent Range: < 0.1
Percent Range Units: weight / weight
CAS No.: Not applicable
LD50: Not applicable
LC50: Not applicable
TLV: Not established
PEL: Not established
Ingredient WHMIS Symbol: Not applicable

Potassium Chloride
Percent Range: 5.0 - 15.0
Percent Range Units: weight / weight
CAS No.: 7447-40-7
LD50: Oral Rat LD50 = 2600 mg/kg; Oral Mouse LD50 = 1500 mg/kg; Oral Guinea Pig LD50 = 2500 mg/kg
LC50: None reported.
TLV: 10 mg/m^3 as inhalable dust; 3 mg/m^3 as respirable dust
PEL: 15 mg/m^3 as inhalable dust; 5 mg/m^3 as respirable dust
Ingredient WHMIS Symbol: Not applicable

4. FIRST AID MEASURES

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.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Flammable Properties: 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 applicable
Hazardous Combustion Products: None reported
Fire / Explosion Hazards: May react violently with: strong oxidizers
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.
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. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. 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.
D.O.T. Emergency Response Guide Number: None

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

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
Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes skin Wash thoroughly after handling. Protect from: oxidizers
TLV: Not established
PEL: Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid
Physical State: Liquid
Molecular Weight: Not applicable
Odor: Not determined
pH: 7.1
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Boiling Point: 99° C (210° F)
Melting Point: Not determined
Specific Gravity/ Relative Density (water = 1; air =1): 1.216
Evaporation Rate (water = 1): 0.22
Volatile Organic Compounds Content: Not determined
Coefficient of Water / Oil: Not determined
Solubility:

Water: Soluble
Acid: Soluble
Other: Not determined

Metal Corrosivity:
Steel: Not determined
Aluminum: Not determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures Heating to decomposition.
Reactivity / Incompatibility: Incompatible with: oxidizers
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: acrolein carbon dioxide carbon monoxide chlorides
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
LD50: None reported
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: Glycerin: DNA inhibition - human lymphocytes 200 mmol/l, Cytogenetic analysis oral rat 1 g/kg
Reproductive Effects Data: Glycerin: Oral rat TDLo = 100 mg/kg - male - one day pre-mating - post-implatation mortality
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Ingredient Toxicological Data: Glycerin: Oral rat LD50 = 12.6 g/kg; Potassium Chloride: Oral rat LD50 = 2600 mg/kg, Oral Man LDLo = 20 mg/kg.

12. ECOLOGICAL INFORMATION

Product Ecological Information: No information is available on this product.
Ingredient Ecological Information: Glycerin: Aquatic toxicity rating, TLm 96: > 1000 ppm

13. DISPOSAL CONSIDERATIONS

Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.
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.

14. TRANSPORT INFORMATION

T.D.G.:
Proper Shipping Name: Not Currently Regulated
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Hazard Class: NA
UN Number/PIN: NA
Packing Group: NA
Subsidiary Risk: NA

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

National Inventories:

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

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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.

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.

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