$The following \ list \ contains \ the \ Material \ Safety \ Data \ Sheets \ you \ requested. \ Please \ scoll \ down \ to \ view \ the \ requested \\ MSDS(s).$

Product	MSDS	Distributor	Format	Language	Quantity
ISENH318103	N/A	Hach Company	OSHA	English	1

Total Enclosures: 1

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

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ammonia Probe **Catalog Number:** ISENH318103

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

MSDS Number: M02773 Chemical Name: Not Applicable CAS No.: Not Applicable Chemical Formula: Not Applicable

Chemical Family: Not applicable Hazard: None unless electrolyte leaks.

Date of MSDS Preparation:

Day: 30
Month: August
Year: 2010

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

MSDS No: M02773

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water

CAS No.: 7732-18-5

TSCA CAS Number: 7732-18-5 **Percent Range:** 60.0 - 70.0

Percent Range Units: volume / volume

LD50: None reported LC50: None reported TLV: Not established PEL: Not established

Hazard: No effects anticipated.

Silver Chloride

CAS No.: 7783-90-6

TSCA CAS Number: 7783-90-6

Percent Range: < 0.01

Percent Range Units: weight / weight

LD50: Oral mouse LD50 > 10 g/kg; Oral guinea pig LD50 > 5 g/kg

LC50: None reported

TLV: 0.01 mg/m³ (as Ag soluble salts)

PEL: Not establishedHazard: May cause irritation.

Potassium Chloride

CAS No.: 7447-40-7

TSCA CAS Number: 7447-40-7 **Percent Range:** 20.0 - 30.0

Percent Range Units: weight / volume **LD50:** Oral rat $LD_{50} = 2600 \text{ mg/kg}$

LC50: None reported.*TLV:* Not established.*PEL:* Not established.

Hazard: May cause irritation.

Cellulose, Mircrocrystalline

CAS No.: 9004-34-6

TSCA CAS Number: 9004-34-6

Percent Range: 5

Percent Range Units: weight / weight

LD50: oral rat >5,000mg/kg **LC50:** rat >5,800 mg/m3/4 h-hour

TLV: 3mg/m3 respirable particles and 10 mg/m3 inhalable particles PEL: 15 mg/m3 total dust; 5 mg/m3 respirable fraction for nuisance dusts

Hazard: dust

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless liquid with white precipitate

Odor: None

MAY CAUSE EYE IRRITATION

HMIS:

Health: 1 Flammability: 0 Reactivity: 0

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

NFPA:

Health: 1 Flammability: 0 Reactivity: 0

Symbol: Not applicable Potential Health Effects:

Eye Contact: May cause irritiation Skin Contact: None reported Skin Absorption: None reported Target Organs: None reported

Ingestion: Very large doses may cause: abdominal cramps weakness circulatory disturbances heart problems central

nervous system effects

Target Organs: Blood Heart Inhalation: No effects anticipated Target Organs: Not applicable

Medical Conditions Aggravated: Pre-existing: Kidney conditions

Chronic Effects: None reported

Cancer / Reproductive Toxicity Information:

This product does NOT contain any OSHA listed carcinogens.

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

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with plenty of water.

Ingestion (First Aid): Give large quantities of water. Call physician immediately.

Inhalation: None required.

5. FIRE FIGHTING MEASURES

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

Hazardous Combustion Products: This material will not burn.

Fire / Explosion Hazards: None reported 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. Evacuate area and fight fire from a safe distance.

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: 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.

Special Instructions (for accidental release): Not applicable

304 EHS RQ (40 CFR 355): Not applicable D.O.T. Emergency Response Guide Number: None

0 7 1

7. HANDLING / STORAGE

Handling: Avoid contact with eyes Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep container tightly closed when not in use.

Flammability Class: Not applicable

O EVDOCIDE COMPLOI C / DEOTECTIVE EQUIDMENT

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

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: disposable latex gloves **Inhalation Protection:** adequate ventilation

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

TLV: Not determined PEL: Not determined

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid with white precipitate

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

pH: Not determined Vapor Pressure: 24 Vapor Density (air = 1): 0.5

Boiling Point: 104

Melting Point: Not determined

Specific Gravity/Relative Density (water = 1; air =1): 1.2

Evaporation Rate (water = 1): Not determined

Volatile Organic Compounds Content: Not determined Partition Coefficient (n-octanol / water): Not applicable

Solubility:

Water: Soluble
Acid: Not determined
Other: Not applicable
Metal Corrosivity:
Steel: Not determined
Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions. *Conditions to Avoid:* Extreme temperatures Evaporation

Reactivity / Incompatibility: May react violently in contact with: bromine trifluoride sulfuric acid potassium

permanganate

Hazardous Decomposition: None reported *Hazardous Polymerization:* Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: Not determined *LC50:* Not determined

Dermal Toxicity Data: Not determined Skin and Eve Irritation Data: Not determined

Mutation Data: Not determined

Reproductive Effects Data: Not determined

Ingredient Toxicological Data:

12. ECOLOGICAL INFORMATION

Product Ecological Information:

No ecological data available for this product.

Ingredient Ecological Information:

No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D011

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. 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

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

DOT Hazard Class: NA DOT Subsidiary Risk: NA DOT ID Number: NA DOT Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

ICAO Hazard Class: NA ICAO Subsidiary Risk: NA ICAO ID Number: NA ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

I.M.O. Hazard Class: NA I.M.O. Subsidiary Risk: NA I.M.O. ID Number: NA I.M.O. Packing Group: 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

U.S. Federal Regulations:

O.S.H.A.: This product is an "Article" as defined in the Hazard Communication Standard (29 CFR. 1910.1200)

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: Not applicable

C.P.S.C.: Not applicable

State Regulations:

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

Identification of Prop. 65 Ingredient(s): Not applicable

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).

TSCA CAS Number:

16. OTHER INFORMATION

Intended Use: Analytical electrodes Analytical electrolytes

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. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. In-house information. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991.

Revision Summary: New MSDS

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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