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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Total Chlorine Indicator

Catalog Number: 2263411

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

MSDS Number: M00469
Chemical Name: Not applicable
CAS No.: Not applicable

Chemical Formula: Not applicable Chemical Family: Not applicable Hazard: Causes eye burns. Carcinogen.

Date of MSDS Preparation:

Day: 13
Month: March
Year: 2007

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

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water

CAS No.: 7732-18-5

TSCA CAS Number: 7732-18-5 Percent Range: 90.0 - 100.0

Percent Range Units: volume / volume

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

Hazard: No effects anticipated.

Sulfuric Acid

CAS No.: 7664-93-9

TSCA CAS Number: 7664-93-9 Percent Range: 5.0 - 15.0

Percent Range Units: weight / volume LD50: Oral rat LD50 = 2140 mg/kg. LC50: Inhalation rat LC50 = 87 ppm/4 hr TLV: 1 mg/m³ (TWA); 3 mg/m³ (STEL)

PEL: 1 mg/m³

Hazard: Causes severe burns. Harmful if inhaled. Recognized carcinogen.

3. HAZARDS IDENTIFICATION

Emergency Overview:

World Headquarters Hach Company P.O.Box 389 Loveland, CO USA 80539 (970) 669-3050 Page 3 Date Printed 2/23/09 MSDS No: M00469

Method: Not applicable Flammability Limits:

Lower Explosion Limits: Not applicable Upper Explosion Limits: Not applicable Autoignition Temperature: Not applicable

Hazardous Combustion Products: May emit toxic and corrosive fumes. Fire / Explosion Hazards: May react violently with: oxidizers reducers

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Dry chemical.

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 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. Stop spilled material from being released to the environment.

Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water.

Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate general area (50 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation. Special Instructions (for accidental release): Mixture contains a component which is regulated as a water pollutant. Product is regulated as RCRA hazardous waste.

304 EHS RQ (40 CFR 355): Sulfuric Acid - RQ 1000 lbs.

D.O.T. Emergency Response Guide Number: 154

7. HANDLING / STORAGE

Handling: Avoid contact with eyes Do not breathe mist or vapors. Use with adequate ventilation. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product. *Storage:* Store away from: reducers alkalies Protect from: heat Store between 10° and 25°C.

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station 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: chemical splash goggles

Skin Protection: lab coat disposable latex gloves Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Use with adequate ventilation. Wash thoroughly after handling. Protect from: heat Keep away from: oxidizers reducers

TLV: Not established PEL: Not established

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EPA Waste ID Number: D002

Special Instructions (Disposal): Work in an approved fume hood. Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

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: Corrosive Liquid, Acidic, Inorganic, N.O.S.

(<10% Sulphuric Acid in Solution)

DOT Hazard Class: 8

DOT Subsidiary Risk: NA

DOT ID Number: UN3264

DOT Packing Group: III

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.

(<10% Sulphuric Acid in Solution)

ICAO Hazard Class: 8

ICAO Subsidiary Risk: NA

ICAO ID Number: UN3264

ICAO Packing Group: III

I.M.O.:

I.M.O. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.

(<10% Sulphuric Acid in Solution)

I.M.O. Hazard Class: 8

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: UN3264

I.M.O. Packing Group: III

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 Delayed (Chronic) 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.

302 (EHS) TPQ (40 CFR 355): Sulfuric Acid 1000 lbs.