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100 ml

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Calcium and Magnesium Indicator Solution

Catalog Number: 2241832

Hach Company P.O.Box 389

Loveland, CO USA 80539

(970) 669-3050

MSDS Number: M00340

Chemical Name: Not applicable

CAS No.: Not applicable

Chemical Formula: Not applicable Chemical Family: Not applicable Hazard: May cause irritation.

Date of MSDS Preparation:

Day: 21
Month: March
Year: 2003

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

2. COMPOSITION / INFORMATION ON INGREDIENTS

Propionic acid

CAS No.: 79-09-4

TSCA CAS Number: 79-09-4 Percent Range: 1.0 - 5.0

Percent Range Units: volume / volume **LD50:** Oral rat LD50 = 2600 mg/kg

LC50: None reported

TLV: 10 ppm *PEL*: 10 ppm

Hazard: Causes burns. Flammable. Harmful if swallowed, inhaled or absorbed through skin.

Demineralized Water

CAS No.: 7732-18-5

TSCA CAS Number: 7732-18-5

Percent Range: >95.0

Percent Range Units: volume / volume

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

Hazard: No effects anticipated.

Other component

CAS No.: Not applicable

TSCA CAS Number: Not applicable

Percent Range: < 0.1

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Percent Range Units: weight / weight

LD50: Not applicable *LC50:* Not applicable *TLV:* Not established *PEL:* Not established

Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard

to the user of this product.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Very dark red solution.

Odor: Not determined

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: No effects anticipated

Target Organs: Not applicable

Ingestion: None reported

Target Organs: None reported Inhalation: No effects anticipated Target Organs: Not applicable

Medical Conditions Aggravated: Pre-existing: Eye 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

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

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Skin Contact (First Aid): Wash skin with plenty of water. Call physician if irritation develops.

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: This product will not burn or explode.

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 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: 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 as needed to perform spill clean-up. 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.

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

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

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

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

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

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Skin Protection: disposable latex gloves Inhalation Protection: adequate ventilation

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

TLV: Not established PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Very dark red solution.

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Not determined

pH: 2.65

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 97° C (207° F)

Melting Point: Not applicable

Specific Gravity (water = 1): 0.995

Evaporation Rate (water = 1): 1.02

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

Solubility:
Water: Soluble
Acid: Soluble

Other: Not determined Metal Corrosivity: Steel: 0.042 in/yr Aluminum: 0.004 in/yr

10. STABILITY / REACTIVITY

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

Reactivity / Incompatibility: None reported

Hazardous Decomposition: Heating to decomposition releases toxic fumes of carbon monoxide and carbon

dioxide.

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: None reported

Reproductive Effects Data: None reported

Ingredient Toxicological Data: Propionic Acid: Oral rat LD50 = 2600 mg/kg

12. ECOLOGICAL INFORMATION

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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: None

Special Instructions (Disposal): 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.

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: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following

classification:

Proper Shipping Name: Chemical Kit

Hazard Class: 9 UN Number 3316.

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

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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) TPO (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): 5000 lbs. Propionic acid

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Propionic acid - RQ 5000 lbs.

RCRA: Contains no RCRA regulated substances.

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

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: Not applicable

16. OTHER INFORMATION

Intended Use: Indicator for calcium Indicator for Magnesium.

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. In-house information. Technical Judgment. NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987.

Revision Summary: Updates in Section(s) 14,

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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