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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Chlorophosphonazo Indicator Solution Pillows

Catalog Number: 2589599

Hach Company P.O.Box 389

Loveland, CO USA 80539

(970) 669-3050

MSDS Number: M00491 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: 15
Month: October
Year: 2009

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

2. COMPOSITION / INFORMATION ON INGREDIENTS

BES Buffer

CAS No.: 10191-18-1

TSCA CAS Number: 10191-18-1 Percent Range: 20.0 - 30.0

Percent Range Units: weight / volume **LD50:** Oral quail LD50 > 316 mg/kg

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

Hazard: May cause irritation. Toxic properties unknown.

Tetramethylammonium Hydroxide

CAS No.: 10424-65-4

TSCA CAS Number: 75-59-2. **Percent Range:** 1.0 - 10.0

Percent Range Units: weight / volume

LD50: None reported LC50: None reported TLV: Not established PEL: Not established Hazard: Causes burns.

Demineralized Water

CAS No.: 7732-18-5

TSCA CAS Number: 7732-18-5 Percent Range: 65.0 - 75.0

Percent Range Units: weight / volume

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

Hazard: No effects anticipated.

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Other component

CAS No.: Not applicable

TSCA CAS Number: Not applicable

Percent Range: < 0.1

Percent Range Units: weight / volume

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: Dark purple liquid

Odor: None

MAY CAUSE EYE AND SKIN IRRITATION

HMIS:

Health: 1

 ${\it Flammability:}\ 0$

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: Causes moderate irritation Skin Contact: Causes moderate irritation

Skin Absorption: None reported

Target Organs: None reported

Ingestion: None reported

Target Organs: None reported

Inhalation: No data reported.

Target Organs: None reported

Medical Conditions Aggravated: None reported

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. Call physician if irritation develops.

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

Inhalation: None required.

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5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn. 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: 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.

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: 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

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin Wash thoroughly after handling. Maintain general industrial hygiene practices

when using this product. **Storage:** Protect from: heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby.

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: heat

TLV: Not established PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Dark purple liquid

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Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

pH: 7.26 @ 23.4° C (74.1° F) Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 98.5° C (209° F)

Melting Point: Not determined

Specific Gravity (water = 1): 1.06

Evaporation Rate (water = 1): Not determined

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

Solubility:

Water: Soluble Acid: Soluble

Other: Not determined

Metal Corrosivity: Steel: 0.002 in/yr Aluminum: 0.004 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Extreme temperatures Evaporation Heating to decomposition.

Reactivity / Incompatibility: Incompatible with: acids oxidizers

Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: carbon dioxide carbon

monoxide nitrogen oxides sulfur oxides *Hazardous Polymerization:* Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported LC50: Not Reported

Dermal Toxicity Data: Not Reported Skin and Eye Irritation Data: None reported

Mutation Data: None reported

Reproductive Effects Data: None reported

Ingredient Toxicological Data: BES Buffer: Oral quail LD50 > 316 mg/kg

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: None

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. 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.

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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 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 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: Contains no RCRA regulated substances.

State Regulations:

C.P.S.C.: Not applicable

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

Identification of Prop. 65 Ingredient(s): None California Perchlorate Rule CCR Title 22 Chap 33:

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: Laboratory Reagent

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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. Technical Judgment. Vendor Information. NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. 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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