MSDS No: M00828

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

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer Solution (Wash Water) for Detergents Catalog Number: 99949

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: M00828 Chemical Name: Not applicable CAS Number: Not applicable Additional CAS No. (for hydrated forms): Not applicable Chemical Formula: Not applicable Chemical Family: Not applicable Intended Use: Laboratory Use Buffer

2. HAZARDS IDENTIFICATION

This mixture is not classified as hazardous per GHS (UN publication ST/SG/AC.10/36/Add.3) GHS Classification: Hazard categories: Corrosive to Metals: Met. Corr. 1 Skin Corrosion/Irritation: Skin Corr. 1A GHS Label Elements: DANGER



Hazard statements: Causes skin irritation. May be corrosive to metals. Causes severe skin burns and eye damage. *Precautionary statements:* Do not breathe dust/fume/gas/mist/vapours/spray. Wear eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF INHALED: Remove victim/person to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Dispose of contents/container according to state, local, federal or national regulations.

HMIS:

Health: 3 Flammability: 0 Reactivity: 0 Protective Equipment: X - See protective equipment, Section 8. NFPA: Health: 2 Flammability: 0 Reactivity: 0 Symbol: Not applicable WHMIS Hazard Classification: Class E - Corrosive material WHMIS Symbols: Corrosive

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Sulfuric Acid

CAS Number: 7664-93-9 Chemical Formula: H₂SO₄ GHS Classification: Met. Corr. 1 H290; Skin Corr. 1A, H314; Aquatic Acute 3, H402 Percent Range: 0.3-1.5 Percent Range Units: weight / weight PEL: 1 mg/m³ TLV: 1 mg/m³

WHMIS Symbols: Acute PoisonCorrosive Hazardous Components according to GHS: No Demineralized Water

> CAS Number: 7732-18-5 Chemical Formula: H₂O GHS Classification: Not a dangerous substance according to GHS. Percent Range: 90.0 - 100.0 Percent Range Units: volume / volume PEL: Not established TLV: Not established

WHMIS Symbols: Not applicable **Sodium Phosphate, Monobasic**

CAS Number: 7558-80-7 Chemical Formula: NaH₂PO₄ GHS Classification: Skin Irrit. 3, H316; Eye Irrit. 2B, H320 Percent Range: 1.0 - 10.0 Percent Range Units: weight / volume PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

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

Skin Contact (First Aid): Wash skin with plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.

Inhalation: Remove to fresh air.

Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: None reported
Hazardous Combustion Products: This material will not burn.

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. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals. *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. Adjust to a pH between 6 and 9. Use sulfuric or citric acid to lower pH. Use soda ash or sodium bicarbonate to increase pH. 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 local area (15 foot radius or as directed by your facility's emergency response plan) when: a gallon or more of liquid is spilled.

DOT Emergency Response Guide Number: 154

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing 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 / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment: Eye Protection: chemical splash goggles Skin Protection: disposable latex gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it. lab coat Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes skin clothing Wash thoroughly after handling. Protect from: freezing TLV: Not established
PEL: Not established
For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid Physical State: Liquid Molecular Weight: Not applicable Odor: None Odor Threshold: Odorless **pH:** 1.75 Metal Corrosivity: Corrosivity Classification: Classified as corrosive to metals. Steel: 0.302 in/yr Aluminum: 0.230 in/yr Specific Gravity/ Relative Density (water = 1; air =1): 1.016 Viscosity: Not determined Solubility: Water: Miscible Acid: Miscible Other: Not determined Partition Coefficient (n-octanol / water): Not applicable Coefficient of Water / Oil: Not applicable Melting Point: Not applicable Decomposition Temperature: Not determined Boiling Point: ~100°C Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined Evaporation Rate (water = 1): 0.59 Volatile Organic Compounds Content: Not applicable 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 Explosive Properties: Not classified according to GHS criteria. **Oxidizing Properties:** Not classified according to GHS criteria. **Reactivity Properties:** Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria. Gas under Pressure: Not classified according to GHS criteria. Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
 Mechanical Impact: None reported
 Static Discharge: None reported.
 Reactivity / Incompatibility: May react violently in contact with: caustics
 Hazardous Decomposition: Heating to decomposition releases: sodium oxides phosphorus oxides
 Conditions to Avoid: Extreme temperatures

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture. Toxicologically Synergistic Products: None reported Acute Toxicity: Route Data Given Below Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Oral Rat LD50 ATE = 79533 mg/kg Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met. Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met. Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met. Eye Damage: Based on classification principles, the classification criteria are not met. Sensitization: Based on classification principles, the classification criteria are not met. CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found. This product does NOT contain any IARC listed chemicals. This product does NOT contain any NTP listed chemicals. This product does NOT contain any OSHA listed carcinogens. Symptoms/Effects: Ingestion: May cause: gastrointestinal tract irritation Inhalation: No effects anticipated Skin Absorption: None Reported Chronic Effects: None reported

Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Mobility in soil: No data available *Ingredient Ecological Information:* --

No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D002

Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. 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.

Empty Containers: Rinse three times with an appropriate solvent. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste. 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. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Sulfuric acid < 3%) Hazard Class: 8 Subsidiary Risk: NA ID Number: UN3264 Packing Group: III T.D.G.: Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Sulfuric acid < 3%) Hazard Class: 8 Subsidiary Risk: NA UN Number/PIN: 3264 Packing Group: III I.C.A.O.: I.C.A.O. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Sulfuric acid < 3%) Hazard Class: 8 Subsidiary Risk: NA ID Number: UN3264 Packing Group: III I.M.O.: Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Sulfuric acid < 3%) Hazard Class: 8 Subsidiary Risk: NA ID Number: UN3264 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
S.A.R.A. Title III Section 313 (40 CFR 372): This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.
Sulfuric acid mists and vapors
302 (EHS) TPQ (40 CFR 355): 1000 lbs. Sulfuric Acid
304 CERCLA RQ (40 CFR 302.4): Sulfuric Acid 1000 lbs.

304 EHS RQ (40 CFR 355): Sulfuric Acid - RQ 1000 lbs. Clean Water Act (40 CFR 116.4): Sulfuric acid - RO 1000 lbs. RCRA: Contains RCRA regulated substances. See Section 13, EPA Waste ID Number. State Regulations: California Prop. 65: WARNING - This product contains a chemical known to the State of California to cause cancer. Identification of Prop. 65 Ingredient(s): Strong inorganic acid mists containing sulfuric acid 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). CAS Number: Not applicable Canadian Inventory Status: All ingredients of this product are DSL Listed. EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS. Australian Inventory (AICS) Status: All ingredients are listed. New Zealand Inventory (NZIoC) Status: All components either listed or exempt. Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt. Japan (ENCS) Inventory Status: All components either listed or exempt. China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). 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. 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, 1991. In-house information. *Complete Text of H phrases referred to in Section 3:* H290 May be corrosive to metals.

Revision Summary: . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation: Day: 05 Month: February Year: 2015

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

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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