Material Safety Data Sheet

MICRO ESSENTIAL LABORATORY , INC.

Date of Preparation: 3-15-2006

HYDRION BUFFER pH-5.00

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: HYDRION BUFFER SALT pH 5.00
Chemical Formula: POTASSIUM BIPHATHALATE AND SODIUM PHOSPHATE DIBASIC
CAS Number: 877-24-7 AND 7558-79-4
General Use: PREPARATION OF BUFFER STANDARDS IN DISTILLED WATER
Manufacturer: MICRO ESSENTIAL LABORATORY INC. P O BOX 10824, 4224 AVENUE H
BROOKLYN, NEW YORK 11210
PHONE 718-338-3618 FAX 718-692-4491 (8.00AM TO 4.00PM EASTERN STANDARD TIME)

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
POTASSIUM BIPHTHALATE	877-24-7	75.0-85.0
SODIUM PHOSPHATE DIBASIC	7558-79-4	15.0-25.0
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Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
POTASSIUM BIPHTHALATE TOXICITY(oral-rat) LD 50 3200 mg/kg	None Estab.	None Estab.	None Estab.	None Estab.	None Estab.	None Estab	None Estab.
SODIUM PHOSPHATE DIBASIC TOXICITY(oral-rat) LD 50 17 g/kg	None Estab.	None Estab.	None Estab.	None Estab.	None Estab	None Estab	None Estab.
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Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

HMIS
H # 0
F # 0
R # 0
PPE†

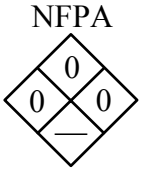
Potential Health Effects

Acute Effects
Inhalation: PROLONGED EXPOSURE MAY CAUSE IRRITATION OF THE NOSE, THROAT AND RESPIRATORY TRACT.
Eye: DUST MIGHT BE IRRITATING TO THE EYES.
Skin: PROLONGED CONTACT MAY CAUSE SKIN IRRITATION OR ALLERGIC REACTION.
Ingestion: CAN IRRITATE STOMACH AND CAUSE MOUTH BURNS.
Carcinogenicity: IARC, NTP, and OSHA DO NOT LIST THIS PRODUCT AS A CARCINOGEN.
Chronic Effects: PROLONGED EXPOSURE TO **BULK POWDER** MAY CAUSE IRRITATION TO THE EYES, SKIN AND RESPIRATORY SYSTEM.

Section 4 - First Aid Measures

Inhalation: REMOVE TO FRESH AIR. GIVE OXYGEN IF BREATHING IS DIFFICULT.
Eye Contact: FLUSH THOROUGHLY WITH WATER FOR 15 MINUTES.
Skin Contact: WASH WITH SOAP AND WATER.
Ingestion: DRINK LOTS OF WATER. DO NOT INDUSE VOMITING. CALL A PHYSICIAN.
After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures



Flash Point: NON FLAMMABLE
LEL: N/A
UEL: N/A
Flammability Classification:NON FLAMMABLE
Extinguishing Media: USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING AREA
Hazardous Combustion Products: MAY RELEASE FUMES OF PHOSPHORUS OXIDE IF INVOLVED IN A FIRE.
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

Section 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.
Spill /Leak Procedures: CAREFULLY SWEEP UP AND DISCARD. CLEAN SPILL AREA WITH COLD WATER. IF PREPARED BUFFER SOLUTION IS SPILLED NEUTRALIZE AND MOP AREA.
Small Spills: WIPE AND CLEAN AREA
Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.
Cleanup Technique: SCOOP UP SPILLED MATERIAL INTO A LARGE BEAKER AND DISSOLVE WITH 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.
DISPOSE OF ALL WASTES IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATION.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Storage Requirements: STORE AT CONTROLLED ROOM TEMP. IN DRY LOCATION. AVOID HIGH TEMPERATURES AND HIGH HUMIDITIES. KEEP CONTAINER CLOSE WHEN NOT IN USE.
Handling Precautions: ***** PERTAINS ONLY TO BULK POWDER HANDLING*****

VENTILATION: USE ADEQUATE GENERAL OR LOCAL VENTILATION TO KEEP FUME AND DUST LEVELS AS LOW AS POSSIBLE.
RESPIRATION PROTACTION: USE NIOSH APPROVED DUST RESPIRATOR WHEN HANDLING BULK POWDER.
EYE PROTACTION : CHEMICAL SPLASH GOGGLES WITH SIDE SHIELDS WHEN HANDLING BULK POWDER.
GLOVES: NATURAL RUBBER, BUTYL NEOPRENE OR EQUIVALENT . WEAR FULL COVER CLOTHING WHEN HANDLING BULK POWDER.
DO NOT BREATH DUST. DO NOT GET INTO EYES. AVOID PROLONGED OR REPEATED SKIN CONTACT. WASH WITH COLD WATER AFTER CONTACT. DO NOT TAKE INTERNALLY.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Appearance and Odor: White to off White granular or crystals odorless powder.
Vapor Pressure: NDA
Vapor Density (Air=1): NDA
Formula Weight: Potassium Biphthalate 204.02 Grams
Sodium Phosphate Dibasic 141.96
Specific Gravity (H_2O=1, at 4 °C): ~ 1
pH: 5.00@ 25 C

Water Solubility: Miscible
Other Solubilities: Not determined
Boiling Point: 100 C
Freezing/Melting Point: NDA
Viscosity: NDA
Refractive Index: NDA
Surface Tension: NDA
% Volatile: NOT VOLATILE
Evaporation Rate: NDA

Section 10 - Stability and Reactivity

Stability: HYDRION BUFFER SALT IS STABLE at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: HAZARDOUS REACTION IN AQUEOUS SOLUTION MAY OCCUR WITH CHLORINE HYPOCHLORUS ACID , HYPOCHLORITES CYANIDES OR SULFIDES.

Section 11- Toxicological Information

Toxicity Data:*

Eye Effects: MAY CAUSE EYE MILD IRRITATION

Skin Effects: MILD IRRITANT TO THE SKIN AND MUCOUS MEMBRANES

Acute Inhalation Effects:
Human, inhalation, NOT REPORTED

Acute Oral Effects:
Rat, oral, LD_{50}: 3200 mg/kg -POTASSIUM BIPHTHALATE

17 g/kg- SODIUM PHOSPHATE DIBASIC

Carcinogenicity: NOT REPORTED
Mutagenicity: NOT REPORTED
Teratogenicity: NOT REPORTED

Section 12 - Ecological Information

NO ECOLOGICAL DATA AVAILABLE FOR THIS PRODUCT

Section 13 - Disposal Considerations

Special instructions (Disposal): 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

BIC ARBONATE. 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.

Notice (Disposal) : THESE DISPOSAL GUIDELINES ARE BASED ON FEDERAL REGULATATIONS AND MAY BE SUPERSEDED BY MORE STRINGENT STATE OR LOCAL REQUIREMENTS. PLEASE CONSULT YOUR LOCAL ENVIRONMENTAL REGULATORS FOR MORE INFORMATATION

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

NOT CURRENYLY REGULATED

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
SARA Toxic Chemical (40 CFR 372.65): Not listed
SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

Section 16 - Other Information

Prepared By: MAF 3-15-2006

Disclaimer:

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL THAT IS NOT SUPPLIED BY MICRO ESSENTIAL LABORATORY AS A BUFFER SALT. THE STATEMENTS CONTAINED HEREIN ARE OFFERED FOR IMFORMATIONAL PURPOSES ONLY AND IS BASED ON TECHNICAL DATA THAT MICRO ESSENTIAL BELIEVES TO BE RELIABLE AND ACCURATE.THE INFORMATION AND DATA ARE INTENDED TO BE FOLLOWED ONLY BY PERSONS WITH TECHNICAL SKILLS AND AT THEIR OWN DISCRETION AND RISK. SINCE CONDITIONS ARE OUTSIDE OUR CONTROL, WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED AND ASSUME NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.
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