

# Material Safety Data Sheet

## MICRO ESSENTIAL LABORATORY, INC.

Date of Preparation: 3-15-2006

### HYDRION BUFFER pH-4.00

#### Section 1 - Chemical Product and Company Identification

**Product/Chemical Name:** HYDRION BUFFER SALT pH 4.00

**Chemical Formula:** POTASSIUM BIPHTHALATE

**CAS Number:** 877-24-7

**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	100.00

#### Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
POTASSIUM BIPHTHALATE							
TOXICITY(oral-rat) LD 50 3200 mg/kg	None Estab.	None Estab.	None Estab.	None Estab.	None Estab	None Estab	None Estab.

#### 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 INDUCE VOMITING. CALL A PHYSICIAN.

*After first aid, get appropriate in-plant, paramedic, or community medical support.*

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### Section 5 - Fire-Fighting Measures

**Flash Point:** NON FLAMMABLE

**LEL:** N/A

**UEL:** N/A

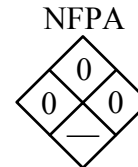
**Flammability Classification:**NON FLAMMABLE

**Extinguishing Media:** USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING AREA

**Hazardous Combustion Products:** MAY RELEASE FUMES OF PHOSPHORUS OXIDE IF INVOLVED IN 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 PROTECTION:** USE NIOSH APPROVED DUST RESPIRATOR WHEN HANDLING BULK POWDER.

**EYE PROTECTION :** 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 BREATHE 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:**

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**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 204.2 grams

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** ~ 1

**pH: 4.00@ 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

**Acute Inhalation Effects:**  
Human, inhalation, NOT REPORTED

**Skin Effects:** MILD IRRITANT TO THE SKIN AND MUCOUS MEMBRANES

**Acute Oral Effects:**  
Rat, oral, LD<sub>50</sub>: 3200 mg/kg- POTASSIUM BITHALATE

**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

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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 CURRENTLY  
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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