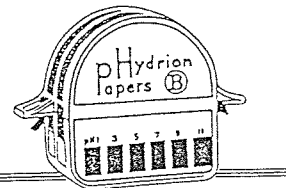


MICRO ESSENTIAL LABORATORY INC.

MANUFACTURERS OF HYDRION pH PAPERS AND HYDRION pH BUFFERS



4224 AVENUE H

• BROOKLYN

• NEW YORK 11210

• 718-338-3618-9

SAFETY INFORMATION FOR HYDRION BUFFER SALT pH 4.00

HYDRION BUFFER SALT pH 4.00 IS A MIXTURE OF SALTS THAT ARE NON-HAZARDOUS WHEN HANDLED AND USED ACCORDING TO OUR DIRECTIONS.

HYDRION BUFFER ARE MANUFACTURED AND FORMULATED FOR LABORATORY USE ONLY AND REQUIRE NO SPECIAL HANDLING, LABELLING OR MARKINGS. HYDRION BUFFERS ARE NOT TO BE TAKEN INTERNALLY.

OUR BUFFER PRODUCTS ARE SAFE FOR SHIPMENT BY AIR, SEA, OR GROUND TRANSPORTATION.

THESE PRODUCTS CONSIST OF STABLE, NON-REACTIVE, NON-FLAMMABLE, NON-VOLATILE AND NON-RADIOACTIVE MATERIALS.

IN CASE OF SPILLAGE SWEEP UP AREA AND PLACE IN CLEAN CONTAINER. IF PREPARED BUFFER SOLUTION IS SPILLED NEUTRALIZE AND MOP AND WASH AREA. DISPOSE OF ALL WASTE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

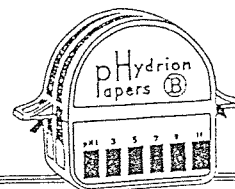
THE COMPOSITION OF OUR HYDRION pH 4.00 BUFFER IS 100% POTASSIUM BIPHTHALATE.

ATTACHED PLEASE FIND MATERIAL SAFETY DATA INFORMATION FOR POTASSIUM BIPHTHALATE (SIMILAR TO PSHA FORM20). THIS CHEMICAL IS ESSENTIALLY NON-HAZARDOUS WHEN USED ACCORDING TO OUR INSTRUCTIONS FOR PREPARATION OF BUFFER SOLUTIONS. KINDLY REFER TO THE ATTACHED SAFETY SHEETS FOR ALL HANDLING, SAFETY AND DISPOSAL REQUIREMENTS BEFORE USING OUR BUFFER SALTS.

ATTACHED : MATERIAL SAFETY DATA SHEET FOR POTSSIUM BIPHTHALATE.

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MATERIAL SAFETY DATA SHEET

Essentially Similar to U.S. Department of Labor Form OSHA—174 SEPT. 1985

PAGE 1 of 3.

Section I — Product Information

EMERGENCY TELEPHONE - 718-338-3618

DATE PREPARED - AUGUST 7th, 1991

TELEPHONE NUMBER FOR INFORMATION - SAME AS ABOVE

TRADE NAME: HYDRION BUFFER SALTS pH 2.00 THROUGH pH 4.00

CHEMICAL NAME & SYNONYMS: POTASSIUM BIPHTEHALATE OR POTASSIUM ACID PHTHALATE

CHEMICAL FAMILY: AROMIC ACID SALT

FORMULA

CAS NUMBER

FORMULA WEIGHT

$\text{HOOC}_6\text{H}_4\text{COOK}$

877-24-7

204.23 grams

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))

OSHA PEL

ACGIH TLV

Other Limits
Recommended

% (optional)

NOT APPLICABLE
POTASSIUM BIPHTHALATE IS
NON HAZARDOUS

NOT
ESTABLISHED

TOXICITY:
ORAL RAT LDLo=
3200mg/kg

Section III — Physical/Chemical Characteristics

Boiling Point N/A

Specific Gravity ($\text{H}_2\text{O}=1$) 1.636

Vapor Pressure (mm Hg.) N/A

Melting Point N/A

Vapor Density (AIR=1) N/A

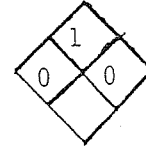
Evaporation Rate N/A
(Butyl Acetate=1)

Solubility in Water 1 TO 10% BY WEIGHT AT 20°C

Appearance and Odor WHITE, ODORLESS ORTHORHOMBIC CRYSYALS.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	NON-FLAMMABLE	Flammable Limits	LEL N/A	UEL N/A
Extinguishing Media	USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.			
Special Fire Fighting Procedures	WEAR SELF CONTAINED BREATHING APPARATUS			
Unusual Fire and Explosion Hazards	NONE			



NFPA

Section V — Reactivity Data

Stability	Unstable	Conditions to Avoid	NONE DOCUMENTED
	Stable		STABLE
Incompatibility (Materials to Avoid)			
Hazardous Decomposition or Byproducts	NONE		
Hazardous Polymerization	May Occur	Conditions to Avoid	NONE DOCUMENTED
	Will Not Occur		WILL NOT OCCUR

Section VI — Health Hazard Data

SYMPTOMS OF OVEREXPOSURE for each potential route of exposure.

Inhaled: MAY CAUSE IRRITATION TO NOSE AND RESPIRATORY SYSTEM.

Contact with skin or eyes: PROLONGED CONTACT MAY CAUSE SKIN IRRITATION OR ALLERGIC REACTION.
Absorbed through skin: DUST MAY BE IRRITATING TO EYES.
CAN CAUSE SKIN IRRITATION.

Swallowed: NONE DOCUMENTED

HEALTH EFFECTS OR RISKS FROM EXPOSURE. Explain in lay terms. Attach extra page if more space is needed.

Acute: NO HARMFUL EFFECTS INDICATED FROM AVAILABLE INFORMATION.

Chronic: MAY CAUSE IRRITATION TO EYES, SKIN AND RESPIRATORY SYSTEM FROM PROLONGED EXPOSURE TO BULK POWDER.

Carcinogenicity:	NTP?	IARC Monographs?	Osha Regulated?
	NOT A CARCINOGEN.		

FIRST AID: EMERGENCY PROCEDURES GET MEDICAL ASSISTANCE IF ANY ADVERSE EFFECTS SHOULD DEVELOPE.

Eye Contact: FLUSH THOROUGHLY WITH WATER FOR 15 MINUTES.

Skin Contact: WASH WITH SOAP AND WATER.

Inhaled: REMOVE TO FRESH AIR.

Swallowed: IF CONCIIOUS INDUCE VOMITING.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
MAY CAUSE IRRITATION TO EYES, SKIN, AND RESPIRATORY SYSTEM FROM PROLONGED EXPOSURE TO BULK POWDER.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

CAREFULLY SWEEP UP AND DISCARD. CLEAN SPILL AREA WITH COLD WATER.
IF PREPARED BUFFER SOLUTION IS SPILLED NEUTRALIZE AND MOP AREA.

Water Disposal Method

NEUTRALIZE BUFFER SOLUTIONS BEFORE DISPOSAL. DISPOSE AT
APPROVED SITE.

NOTE: Dispose of all wastes in accordance with federal, state and local regulations.

Precautions to Be Taken in Handling and Storing

STORE IN COOL DRY AREA IN CLOSED CONTAINER.

Other Precautions

DO NOT BREATHE DUST OR GET INTO EYES. AVOID PROLONGED
SKIN CONTACT.

VII — SPECIAL HANDLING INFORMATION

*** PERTAINS ONLY TO BULK POWDER HANDLING ***

Ventilation and engineering controls

USE ADEQUATE GENERAL OR LOCAL VENTILATION TO KEEP
FUME AND DUST LEVELS AS LOW AS POSSIBLE.

Respiratory protection (type)

NONE REQUIRED WHERE ADEQUATE VENTILATION CONDITIONS
EXIST. IF AIRBOURNE DUST CONCENTRATION IS HIGH USE APPROPRIATE
NIOSH APPROVED DUST RESPIRATOR.

Eye protection (type)

SAFETY GLASSES WITH SIDE SHIELDS.

Gloves (specify material)

NATURAL RUBBER, NEOPRENE OR EQUIVALENT.

Other clothing and equipment

FULL COVER CLOTHING

Work practices, hygienic practices

DO NOT BREATHE DUST. DO NOT GET INTO EYES.
AVOID PROLONGED OR REPEATED SKIN CONTACT. WASH WITH COLD
WATER AFTER USE. DO NOT TAKE INTERNALLY.

Other handling and storage requirements

STORE AT CONTROLLED ROOM TEMPERATURE IN DRY LOCATIONS.

Protective measures during maintenance of contaminated equipment.

WEAR FULL COVER CLOTHING,
SAFETY GOGGLES, DUST RESPIRATOR AND GLOVES WHEN EXPOSED TO BULK POWDER
HANDLING.

** NOTE N/A = NOT APPLICABLE OR NOT AVAILABLE

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 informational purposes only and is based on technical data that Micro Essential Laboratory believes to be reliable. 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. We reserve the right to revise this safety sheet from time to time.