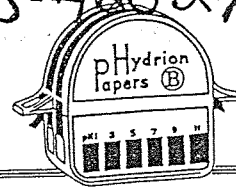


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MICRO ESSENTIAL LABORATORY INC.

MANUFACTURERS OF HYDRION pH PAPERS AND HYDRION pH BUFFERS



4224 AVENUE H

BROOKLYN

NEW YORK 11210

718-338-3618-9

SAFETY INFORMATION

ON

HYDRION COLOR KEY BUFFER PRESERVATIVE

HYDRION COLOR KEY BUFFER PRESERVATIVE SOLUTIONS ARE ESSENTIALLY CLASSIFIED AS NON-HAZARDOUS MATERIALS UNDER OSHA REGULATIONS WHEN USED ACCORDING TO OUR DIRECTIONS.

HYDRION COLOR KEY BUFFER PRESERVATIVE IS MANUFACTURED AND FORMULATED FOR LABORATORY USE ONLY AND REQUIRES NO SPECIAL HANDLING, LABELLING OR MARKINGS. HYDRION COLOR KEY BUFFER PRESERVATIVE IS NOT TO BE TAKEN INTERNALLY.

OUR COLOR KEY PRESERVATIVE IS SAFE FOR SHIPMENT BY AIR, SEA OR GROUND TRANSPORTATION.

OUR HYDRION BUFFER COLOR KEY PRESERVATIVE SOLUTION CONSISTS OF INDICATOR DYES OF THE SULFONPHTHALEIN GROUP THAT HAVE BEEN DISSOLVED IN SOLVENTS. THESE SOLUTIONS ARE TO BE USED IN VITRO ONLY!! THE CONCENTRATION OF DISSOLVED DYE IS VERY SMALL. THIS PRODUCT CONSIST OF STABLE, NON-REACTIVE MATERIALS. IT IS NON-VOLATILE AND NOT RADIOACTIVE. THE SOLUTION CAN BE DISCARDED ACCORDING TO LOCAL, STATE AND FEDERAL ENVIRONMENTAL PROCEDURES AND REGULATIONS.

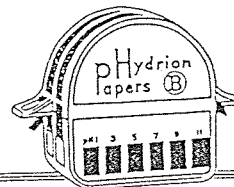
OUR HYDRION COLOR KEY BUFFER PRESERVATIVE SOLUTION SHOULD BE USED TO PRESERVE THE HYDRION BUFFER SOLUTION STANDARDS. KINDLY REFER TO THE RESPECTIVE MATERIAL SAFETY DATA SHEETS FOR HANDLING AND DISPOSAL PROCEDURES OF THE PREPARED BUFFER SOLUTIONS.

HYDRION BUFFER COLOR KEY PRESERVATIVE SOLUTIONS SHOULD BE STORED AT CONTROLLED ROOM TEMPERATURE AND AT DRY LOCATIONS. PROTECT SOLUTION FROM SUNLIGHT.

ATTACHED PLEASE FIND MATERIAL SAFETY DATA INFORMATION FOR COLOR KEY BUFFER PRSERVATIVE (SIMILAR TO OSHA FORM 174). THE SOLUTION IS ESSENTIALLY NON-HAZARDOUS WHEN USED ACCORDING TO OUR INSTRUCTIONS FOR PREPARATION OF BUFFER SOLUTIONS. KINDLY REFER TO THE ATTACHED SHEETS FOR ALL HANDLING, SAFETY AND DISPOSAL REQUIREMENTS BEFORE USING OUR COLOR KEY BUFFER PRESERVATIVE.

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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 - FEB 12th, 1988

TELEPHONE NUMBER FOR INFORMATION - 718-338-3618

TRADE NAME: HYDRION COLOR KEY BUFFER PRESERVATIVE

CHEMICAL NAME & SYNONYMS: INDICATOR AND PRESERVATIVE SOLUTION.

CHEMICAL FAMILY: SULFONPHTHALEIN INDICATORS

FORMULA N/A

CAS NUMBER
REFER BELOW

FORMULA WEIGHT N/A

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
POLYETHYLENE GLYCOL CAS# 25322-68-3				NONE ESTABLISHED
INSOPROPYL ALCOHOL CAS# 67-63-0				400 PPM
METHYL p-HYDROXY BENZOATE CAS# 99-76-3				LD ₅₀ 8000 mg/kg bw-MOUSE
3-3'DIBROMOTHYMOLSULFONPHTHALEIN CAS# 76-59-5				NONE ESTABLISHED
2[[4-(DIMETHYLAMINO)PHENYL] AZO] BENZIOIC ACID CAS# 845-10-3				NONE ESTABLISHED
THYMOLSULFONPHTHALEIN CAS# 81012-93-3				NONE ESTABLISHED

Section III — Physical/Chemical Characteristics

Boiling Point	NO PHYSICAL DATA AVAILABLE	Specific Gravity (H ₂ O=1)	1.045 AT 20/20°C (wght avg)
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR=1)	>1	Evaporation Rate (Butyl Acetate=1)	LESS THAN 1
Solubility in Water	VERY GOOD		
Appearance and Odor	RED SOLUTION, MILD ODOR		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
ESSENTIALLY NON-FLAMMABLE	N/A		N/A

Extinguishing Media USE CO₂, DRY CHEMICALS, ALCOHOL TYPE OR UNIVERSAL TYPE FOAMS APPLIED BY MANUFACTURERS RECOMMENDED TECHNIQUES.

Special Fire Fighting Procedures USE SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING. DO NOT DIRECT SOLID STREAM OF WATER OR FOAM INTO HOT, BURNING POOLS, THIS MAY CAUSE FROTHING AND INCREASE INTENSITY.

Unusual Fire and Explosion Hazards CAN EMIT TOXIC FUMES UNDER FIRE. VAPORS MAY FORM FROM THIS PRODUCT AND MAY TRAVEL OR BE MOVED AIR CURRENTS AND BE IGNITED BY PILOT LIGHTS AND OTHER SIMILAR OF ELECTRICAL SOURCES.

Section V — Reactivity Data

Stability	Unstable	Conditions to Avoid	HEAT, SPARKS AND FLAMES.
	Stable XX	PRODUCT IS STABLE.	

Incompatibility (Materials to Avoid) AVOID STRONG BASES, STRONG ACIDS, STRONG OXIDIZERS, ALDEHYDES, HALOGENS AND HALOGEN COMPOUNDS.

Hazardous Decomposition or Byproducts MIGHT DECOMPOSE BY ABOVE CONDITIONS AND FORM TOXIC FUMES.

Hazardous Polymerization	May Occur	Conditions to Avoid	NONE.
	Will Not Occur XXXX		

Section VI — Health Hazard Data

** SYMPTOMS OF OVEREXPOSURE for each potential route of exposure. **

Inhaled: MAY CAUSE MILD IRRITATION TO THE NOSE AND THROAT.

Contact with skin or eyes: MAY CAUSE IRRITATION AND BURNS.

Absorbed through skin: MAY BE HARMFUL BY EXPOSURE OF LARGE QUANTITIES.

Swallowed: TOXIC INGESTION IN LARGE QUANTITIES MAY CAUSE DROWSINESS AND LOSS OF CONSCIOUSNESS, STOMACH CRAMPS, PAIN, NAUSEA, VOMITING AND DIARRHEA MAY OCCUR.

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

** Acute: SEE ABOVE INFORMATION. ** TO THE BEST OF OUR KNOWLEDGE THE CHEMICAL, PHYSICAL AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED FOR ALL THE CHEMICALS IN OUR SOLUTION.

** Chronic: PROLONGED SKIN CONTACT WITH LARGE AMOUNTS OF SOLUTION COULD CAUSE SKIN IRRITATION OR ALLERGIC REACTION.

** Carcinogenicity:	NTP?	IARC Monographs?	Osha Regulated?
NO DATA HAS BEEN ESTABLISHED		N/A	N/A

FIRST AID: EMERGENCY PROCEDURES GET MEDICAL ASSISTANCE IF ANY ADVERSE EFFECTS SHOULD DEVELOP!

Eye Contact: IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

Skin Contact: IMMEDIATELY FLUSH SKIN WITH WATER AND WASH WITH SOAP AND LARGE AMOUNTS OF WATER.

Inhaled: REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT GIVE OXYGEN. CALL A PHYSICIAN.

Swallowed: IF CONSCIOUS INDUCE VOMITING AND CALL A PHYSICIAN.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
SEE ABOVE HEALTH INFORMATION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

SMALL SPILLS SHOULD BE FLUSHED WITH LARGE AMOUNTS OF WATER. LARGER SPILLS SHOULD BE COLLECTED FOR DISPOSAL.

Water Disposal Method

INCINERATE IN A CHEMICAL INCINERATOR EQUIPPED WITH A AFTERBURNER AND SCRUBBER FOR DISPOSAL OF LARGE AMOUNTS OF SOLUTION.

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 AREAS AT CONTROLLED ROOM TEMPERATURES. AVOID HIGH TEMPERATURES AND FREEZING TEMPERATURES.

Other Precautions

DO NOT GET INTO EYES, ON SKIN OR ON CLOTHING. WASH THOROUGHLY AFTER HANDLING.

VII — SPECIAL HANDLING INFORMATION

Ventilation and engineering controls

LOCAL EXHAUST OR GENERAL MECHANICAL ROOM VENTILATION IS EXPECTED TO BE SATISFACTORY.

Respiratory protection (type)

NONE EXPECTED TO BE NEEDED.

Eye protection (type)

SAFETY GLASSES.

Gloves (specify material)

PVC - COATED (ESPECIALLY FOR BULK SOLUTION HANDLING)

Other clothing and equipment

EYE BATH AND SAFETY SHOWER (FOR BULK SOLUTION HANDLING)

Work practices, hygienic practices

DO NOT GET INTO EYES. AVOID PROLONGED OR REPEATED SKIN CONTACT. WASH WITH SOAP AND WATER AFTER USE. DO NOT TAKE INTERNALLY.

Other handling and storage requirements

STORE AT CONTROLLED ROOM TEMPERATURES AND AT DRY LOCATIONS.

Protective measures during maintenance of contaminated equipment. WEAR FULL COVER CLOTHING, GOGGLES AND GLOVES WHEN EXPOSED TO BULK SOLUTION 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.