

Material Safety Data Sheet

MICRO ESSENTIAL LABORATORY, INC.

Date of Preparation: 3-15-2003

HYDRION BUFFER pH-7.00

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: HYDRION BUFFER SALT pH 7.00

Chemical Formula: POTASSIUM PHOSPHATE MONOBASIC AND SODIUM PHOSPHATE DIBASIC

CAS Number: 7778-77-0 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 PHOSPHATE MONOBASIC	7778-77-0	30.0-40.0
SODIUM PHOSPHATE DIBASIC	7558-79-4	60.0-70.0

Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
POTASSIUM PHOSPHATE MONOBASIC TOXICITY(oral-rat) LD 50 7100 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.

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.

Section 5 - Fire-Fighting Measures

Flash Point: NON FLAMMABLE

LEL: N/A

UEL: N/A

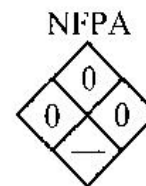
Flammability Classification:NON FLAMMABLE

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.

Clean-up Technique ABSORB SPILLED LIQUID WITH NON-REACTIVE SORBENT MATERIAL. SWEEP UP MATERIAL. PLACE MATERIAL IN A PLASTIC BAG. MARK BAG 'NON-HAZARDOUS TRASH', AND DISPOSE OF AS NORMAL REFUSE. DECONTAMINATE THE AREA OF THE SPILL WITH A SOAP SOLUTION

Evacuation Procedure : EVACUATE AS NEEDED TO PERFORM SPILL CLEAN-UP. IF CONDITIONS WARRANT, INCREASE THE SIZE OF EVACUATION.

Special Instructions (for accidental release) : NOT APPLICABLE.

304 EHS RQ (40 CFR 355) : NOT APPLICABLE.

D.O.T. Emergency Response guide Number : NOT ALLOCATED.

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 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.

HYDRION BUFFER pH -7.00

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 Phosphate Monobasic
136.09 Grams

Sodium Phosphate Dibasic
141.96

Specific Gravity (H₂O=1, at 4 °C): ~ 1

pH: 7.00@ 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: NOT REPORTED

Skin Effects: NOT REPORTED

Acute Inhalation Effects:

Human, inhalation, NOT REPORTED

Acute Oral Effects:

Rat, oral, LD₅₀: 7100 mg/kg -POTASSIUM PHOSPHATE
MONOBASIC

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

EPA Waste ID Number : NONE

Special Instructions (Disposal) : OPEN COLD WATER TAP COMPLETELY, SLOWLY POUR THE MATERIAL TO THE DRAIN. FLUSH SYSTEM WITH PLENTY OF WATER.

Empty Containers : RINSE THREE TIMES WITH AN APPROPRIATE SOLVENT. 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.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

**NOT REGULATED AT
THIS TIME**

Section 15 - Regulatory Information

EPA Regulations:

- RCRA Hazardous Waste Number (40 CFR 261.33): Not listed
- 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 3-15-2000

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 INFORMATIONAL 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. WE RESERVE RIGHT TO REVISE THIS SAFETY SHEET FROM TIME TO TIME.

MICRO ESSENTIAL LABORATORY INC. @2000

Material Safety Data Sheet

MICRO ESSENTIAL LABORATORY, INC.

Date of Preparation: 3-15-2003

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	
	TWA	STEL	TWA	STEL	IDLH
POTASSIUM BIPHTHALATE	None Estab.	None Estab.	None Estab.	None Estab.	None Estab.
TOXICITY(oral-rat) LD 50 3200 mg/kg					

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.

HYDRION BUFFER pH - 4.00

Section 5 - Fire-Fighting Measures

Flash Point: NON FLAMMABLE

LEL: N/A

UEL: N/A

Flammability Classification:NON FLAMMABLE

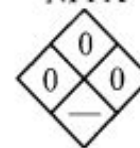
Extinguishing Media: USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING AREA

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.

NFPA



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:

HYDRION BUFFER pH - 4.00

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 (H₂O=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, LD₅₀: 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

HYDRION BUFFER pH - 4.00

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 INFORMATION

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 3-15-2003

Disclaimer:

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WE RESERVE RIGHT TO REVISE THIS SAFETY SHEET FROM TIME TO TIME.

MICRO ESSENTIAL LABORATORY INC. @2003

Material Safety Data Sheet

Potassium Chloride Solution with AgCl

Identity: Potassium Chloride Solution Saturated with Silver Chloride

Form/Aspect: KCl salts with trace AgCl dissolved in water

Use: Electrolyte Solution for electrodes with an Ag/AgCl reference

Also sold separately as a refill solution

Part #: AS-3110-C20-0250

AS-3110-C20-0500

Section I - General Information

Manufacturer: Broadley-James Corporation, 19 Thomas, Irvine, CA 92618

Phone: (949) 829-5555

Emergency Phone: (949) 829-5555 Or (800) 288-2833

Date Prepared: May 17, 2006

Section II - Ingredient Information

Potassium Chloride 28.3% OSHA PEL/ACGIH TLV: N/A

Cas. No.: 7447-40-7

Molecular Formula: KCl

Silver Chloride .001%

Cas. No.: 7783-90-60

Molecular Formula: AgCl

Water Balance

***According to OSHA, this product should not be considered a hazardous material.**

Section III - Physical/Chemical Characteristics

Boiling Point: N/A

Vapor Density (Water): N/A

Melting Point: N/A

Appearance/Odor: Clear, odorless liquid

Water Solubility: 100% by weight

Specific Gravity (H₂O=1): 1.15

Evaporation Rate: N/A

Vapor Pressure: (mm Hg): N/A

Reactivity In Water: N/A

Section IV - Fire And Explosion Hazard Data

Flash Point: N/A

Unusual Fire & Explosion Hazards: None

Extinguishing Media: Any

Flammable Limits: LEL: N/A UEL: N/A

Special Fire Fighting Procedures: N/A

Manufacturers of pH & DO Sensors for Science and Industry

19 Thomas, Irvine, California 92618 USA

Phone: 949.829.5555 Toll-Free: 800.288.2833 Fax: 949.829.5560

E-Mail: sales@broadleyjames.com Website: www.broadleyjames.com



MSDS (Continued)

MSDS - Page 2

Identity: Potassium Chloride Solution Saturated with Silver Chloride
Part #: AS-3110-C20-0250
AS-3110-C20-0500

Section V - Reactivity Data

Stability: Stable
Hazardous Polymerization: Will Not Occur
Incompatibility: BrF₃
Hazardous Decomposition Or Byproducts: N/A
Conditions To Avoid: None Known
Conditions To Avoid: None Known

Section VI - Health Hazard Data

Exposure Limit: Potassium Chloride: Oral-Guinea Pig LD50: 2500 mg/kg
Route Of Entry: Inhalation: N/A Skin: N/A Ingestion: Yes
Carcinogenicity: NTP: N/A IARC Monogr: N/A OSHA Reg.: No
Health Hazards: None Known
Effects Of Overexposure: (See below)
Emergency & First Aid Procedures:
Oral: Large doses cause GI irritation, purging, weakness and circulatory problems. Contact a physician.

Section VII- Precautions For Safe Handling And Use

Spill Response: Pick up and wash down drain with excess of water.
Waste Disposal: Not regulated.
Precautions To Be Taken In Handling & Storage: Store in cool, dry place.
Other Precautions: N/A

Section VIII - Control Measures

Respiratory Protection: N/A
Protective Gloves: Optional
Other Protective Equipment: None Required
Ventilation: None
Eye Protection: Safety Glasses
Work/Hygienic Practices: Wash hands thoroughly before eating, drinking or smoking.

Key: N/A = Not Applicable Or Not Available
N/D = Not Determined



Manufacturers of pH & D.O. Sensors for Science and Industry

19 Thomas, Irvine, California 92618 USA

Phone: 949.829.5555 Toll-Free: 800.288.2833 Fax: 949.829.5560

E-Mail: sales@broadleyjames.com Website: www.broadleyjames.com