

Material Safety Data Sheet

MICRO ESSENTIAL LABORATORY, INC.

Date of Preparation: 3-15-2000

HYDRION BUFFER pH-10.00

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: HYDRION BUFFER SALT pH 10.00

Chemical Formula: SODIUM CARBONATE AND SODIUM BICARBONATE

CAS Number: 497-19-8 AND 144-55-8

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 |
|--------------------|------------|-----------|
| SODIUM CARBONATE | 497-19-8 | 50.0-70.0 |
| SODIUM BICARBONATE | 144-55-8 | 30.0-50.0 |

Trace Impurities:

| Ingredient | OSHA PEL | | ACGIH TLV | | NIOSH REL | | NIOSH IDLH |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | TWA | STEL | TWA | STEL | TWA | STEL | |
| SODIUM CARBONATE TOXICITY(oral-rat) LD 50 4090 mg/kg | None Estab. | None Estab. | None Estab. | None Estab. | None Estab. | None Estab. | None Estab. |
| SODIUM BICARBONATE TOXICITY(oral-rat) LD 50 4220 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

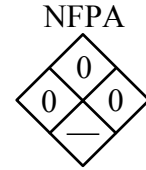
Flammability Classification:NON FLAMMABLE

Extinguishing Media: USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING AREA

Hazardous Combustion Products: MAY RELEASE CARBON MONOXIDE 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 : COVER SPILLED MATERIAL WITH A DRY ACID, SUCH AS CITRIC OR BORIC. SCOOP UP SLURRY INTO A LARGE BEAKER. ADJUST TO A pH BETWEEN 6 AND 9 WITH A DILUTED ACID, SUCH AS SULFURIC OR CITRIC. FLUSH REACTED MATERIAL TO THE DRAIN WITH A LARGE EXCESS OF WATER.

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.

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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: Sodium Carbonate

105.99 Grams

Sodium Bicarbonate

84.01

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

pH: 10.00@ 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 STRONG ACID, ALUMINIUM, FLOURINE, PHOSPHORUS PENTOXIDE AND AMMONIUM PHOSPHATE MONOBASIC.

Section 11- Toxicological Information

Toxicity Data:*

Eye Effects: MAY CAUSE EYE IRRITATION

Acute Inhalation Effects:
Human, inhalation, NOT REPORTED

Skin Effects:IRRITATING TO THE SKIN AND MUCOUS MEMBRANES

Acute Oral Effects:
Rat, oral, LD₅₀: 4090mg/kg -SODIUM CARBONATE

4220mg/kg- SODIUM BICARBONATE

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) : ADJUST TO A pH BETWEEN 6 AND 9 WITH A DILUTED ACID, SUCH AS SULFURIC OR CITRIC. FLUSH REACTED MATERIAL TO THE DRAIN WITH A LARGE EXCESS 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

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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 3-15-2000

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.

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