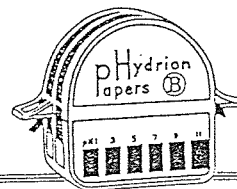


MICRO ESSENTIAL LABORATORY INC.

MANUFACTURERS OF HYDRION pH PAPERS AND HYDRION pH BUFFERS



4224 AVENUE H

BROOKLYN

NEW YORK 11210

718-338-3618-9

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 - MAY 20th, 1992

TELEPHONE NUMBER FOR INFORMATION - SAME AS ABOVE

TRADE NAME: HYDRION BUFFER SALTS pH 9.00 THROUGH 11.00

CHEMICAL NAME & SYNONYMS: SODIUM CARBONATE, ANHYDROUS - SODA ASH

CHEMICAL FAMILY: ALKALI SALT

FORMULA

CAS NUMBER

FORMULA WEIGHT

Na_2CO_3

497-19-8

105.99 grams

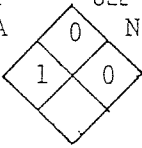
Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
NOT APPLICABLE SODIUM CARBONATE, ANHYDROUS IS NON HAZARDOUS	NOT ESTABLISHED	NONE ESTABLISHED	LD10 ORL-RAT 4000mg/kg LD50 ipr-mus 117mg/kg LC50 ihl-mus 1200mg/cu.m./2H	

Section III — Physical/Chemical Characteristics

Boiling Point	DECOMPOSES	Specific Gravity ($\text{H}_2\text{O}=1$)	2.53
Vapor Pressure (mm Hg.)	N/A	Melting Point	851°C
Vapor Density (AIR=1)	N/A	Evaporation Rate (Butyl Acetate=1)	N/A
Solubility in Water	22% BY WEIGHT AT 20°C		
Appearance and Odor	ODORLESS, WHITE GRANULAR POWDER		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	NON-FLAMMABLE	Flammable Limits	LEL N/A	UEL N/A
Extinguishing Media	ANY MEDIA SUITABLE FOR SURROUNDING MATERIAL		 NFPA	
Special Fire Fighting Procedures	WEAR SELF CONTAINED BREATHING APPARATUS			
Unusual Fire and Explosion Hazards	NONE, BUT AT 400°C STARTS TO DECOMPOSE AND LOSE CO ₂			

Section V — Reactivity Data

Stability	Unstable STABLE Stable	Conditions to Avoid	CONTACT WITH STRONG ACIDS RESULTS IN VIOLENT REACTION. WITH CALCIUM HYDROXIDE IT FORMS IRRITATING CAUSTIC-SODA
Incompatibility (Materials to Avoid)	ACIDS, ALUMINUM, FLOURINE, PHOSPHORUS PENTOXIDE		
Hazardous Decomposition or Byproducts	CASEOUS CARBON DIOXIDE, NA ₂ O		
Hazardous Polymerization	May Occur Will Not Occur	Conditions to Avoid	WILL NOT OCCUR.

Section VI — Health Hazard Data

SYMPTOMS OF OVEREXPOSURE for each potential route of exposure.

Inhaled: CAUSES IRRITATION OF THE RESPIRATORY TRACT.

Contact with skin or eyes: CAUSES SKIN AND EYE IRRITATION, MAY CAUSE EYE BURNS.

Absorbed through skin: MAY CAUSE SKIN IRRITATION.

Swallowed: INGESTION CAN SEVERELY DAMAGE MUCOUS MEMBRANES AND CAUSE PAIN, VOMITING
DIARRHEA AND CIRCULATORY COLLAPSE.

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

Acute:

CAN BE HARMFUL IF SWALLOWED.

*** TESTS ON LABORATORY ANIMALS INDICATE MATERIAL MAY PRODUCE ADVERSE REPRODUCTIVE EFFECTS.

Chronic: IRRITATING TO EYES, SKIN AND RESPIRATORY TRACT AND CAN BURN EYES.
INGESTION CAN SEVERELY DAMAGE MUCOUS MEMBRANES AND CAUSE PAIN.

Carcinogenicity:

NTP?

IARC Monographs?

Osha Regulated?

N/A

FIRST AID: EMERGENCY PROCEDURES GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE

Eye Contact: IMMEDIATELY FLUSH EYES THOROUGHLY FOR 15 MINUTES.

Skin Contact: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER.

Inhaled: REMOVE TO FRESH AIR: GIVE ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED.

Swallowed: DO NOT INDUCE VOMITING; IF CONSCIOUS GIVE WATER FREELY AND GET MEDICAL ATTENTION.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

CAN CAUSE SKIN, EYE AND RESPIRATORY IRRITATION. SEE ABOVE INFO!!

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

SWEEP POWDER INTO CONTAINER. FLUSH SPILL AREA WITH WATER AND NEUTRALIZE BEFORE DISPOSAL. IF PREPARED BUFFER SOLUTION IS SPILLED, NEUTRALIZE AND MOP AREA.

Water Disposal Method

NEUTRALIZE BUFFER SOLUTIONS BEFORE DISPOSAL AND DISPOSE AT AN "APPROVED SITE".

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

Precautions to Be Taken in Handling and Storing

KEEP STORAGE CONTAINERS TIGHTLY CLOSED. STORE IN A COOL, DRY, WELL-VENTILATED AREA. STORE AWAY FROM MINERAL AND ORGANIC ACIDS.

Other Precautions

DO NOT BREATHE DUST. DO NOT GET INTO EYES. AVOID SKIN CONTACT. DO NOT TAKE INTERNALLY. WASH THOROUGHLY AFTER HANDLING. AVOID MOISTURE OR PERSPIRATION CONTACT - WILL CAUSE CAUSTIC BURN.

VII — SPECIAL HANDLING INFORMATION

*** PERTAINS TO BULK POWDER HANDLING ***

Ventilation and engineering controls

MATERIAL SHOULD BE HANDLED WITH ADEQUATE VENTILATION (LOCAL EXHAUST), OR IN AN APPROVED FUME HOOD OR AREA WITH MECHANICAL VENTILATION.

Respiratory protection (type)

NIOSH APPROVED RESPIRATOR FOR DUST.

Eye protection (type)

SAFETY GLASSES WITH SIDE SHIELDS MUST BE WORN AT ALL TIMES.

Gloves (specify material)

PROTECTIVE GLOVES (NEOPRENE, PVC, OR EQUIVALENT) SHOULD BE WORN TO PREVENT SKIN CONTACT.

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 IN TIGHT CONTAINERS, IN DRY, ROOM TEMPERATURE LOCATIONS.

Protective measures during maintenance of contaminated equipment.

WEAR PROTECTIVE CLOTHING, SAFETY GLASSES, GLOVES AND APPROVED RESPIRATOR WHEN EXPOSED TO BULK POWDER HANDLING.

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.