1. IDENTIFICATION

Product identifier
Product Name HYDRION BUFFER pH-9.50

Other means of identification
SDS # MEL-028

Recommended use of the chemical and restrictions on use.
Recommended Use For preparation of buffer standards in distilled water.

Details of the supplier of the safety data sheet
Supplier Address MICRO ESSENTIAL LABORATORY, INC
PO BOX 100824, 4224 AVENUE H
BROOKLYN, NY 11210

Emergency telephone number
Company Phone Number PHONE: 718-338-3618 FAX: 718-692-4491 (8:00AM TO 4:00PM EASTERN STANDARD TIME)
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance White to off white Granules, crystals or powder
Physical state Solid
Odor Odorless

Classification

| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Serious eye damage/eye irritation | Category 2 |

Signal Word Warning

Hazard statements
Harmful if inhaled
Causes serious eye irritation

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear eye protection/ face protection
Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>30-40</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST AID MEASURES

Description of first aid measures

Eye Contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact
Wash affected areas thoroughly with soap and water for at least 15 minutes. Get medical attention if necessary.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Call a poison center or doctor/physician if you feel unwell.

Ingestion
Drink plenty of water. Do not induce vomiting without medical advice. Get medical attention if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms
Dust may be irritating to eyes. Prolonged skin contact may cause skin irritation or allergic reaction. The eye irritation may be severe. Ingestion can irritate stomach and cause mouth burns. Prolonged exposure by inhalation may cause irritation of the nose, throat and respiratory tract. Prolonged exposure to BULK POWDER may cause irritation to the eyes, skin and respiratory system.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Non-flammable.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Do not release runoff from fire control methods to sewers or waterways.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required. Keep unnecessary people away, isolate hazard area and deny entry. Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only.

For Emergency Responders Follow applicable OSHA regulations (29 CFR 1910.120).

Environmental precautions

Environmental precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Sweep up, place in a bag, and hold for waste disposal. If permitted by local regulations and authorities dispose of as normal refuse. However, if NOT permitted to do so then waste must be disposed of according to RCRA regulations. Wash area with soap and water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid breathing dusts. Use only with adequate ventilation. Wash face, hands and any exposed skin thoroughly after handling. The following precautions pertain only to BULK POWDER handling:
Ventilation: Use adequate general or local ventilation to keep fume and dust levels as low as possible
Respiratory 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. Avoid contact with skin, eyes or clothing. Do NOT take internally.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Avoid excessive temperatures & high humidity.

Incompatible Materials Hazardous reaction in aqueous solution may occur with strong acid, aluminum, fluorine, phosphorus pentoxide and ammonium phosphate monobasic.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers. Local exhaust ventilation recommended.
Individual protection measures, such as personal protective equipment

Eye/Face Protection Refer to 29 CFR 1910.133 for eye and face protection regulations. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.

Skin and Body Protection Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact.

Respiratory Protection Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Solid</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>White to off white Granules, crystals or powder</td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>White to off white</td>
<td>Odor Threshold Not determined</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Odorless</td>
<td></td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td><strong>Values</strong></td>
<td><strong>Remarks • Method</strong></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>9.50</td>
<td></td>
</tr>
<tr>
<td><strong>Melting point / freezing point</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td>100 °C / 212 °F</td>
<td></td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Non-flammable</td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability (Solid, Gas)</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Upper flammability or explosive limits</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Lower flammability or explosive limits</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Relative Density</strong></td>
<td>~1</td>
<td>@ 60°F (ASTM D 1298)</td>
</tr>
<tr>
<td><strong>Water Solubility</strong></td>
<td>Miscible in water</td>
<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Partition Coefficient</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Dynamic Viscosity</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Explosive Properties</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing Properties</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Molecular weight</strong></td>
<td>Sodium Carbonate 105.99 grams</td>
<td>Sodium Bicarbonate 84.01 grams</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
See below - Incompatible Materials.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible materials
Hazardous reaction in aqueous solution may occur with strong acid, aluminum, fluorine, phosphorus pentoxide and ammonium phosphate monobasic.

Hazardous decomposition products
Toxic fumes of carbon monoxide or irritant smoke.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact
Avoid contact with eyes.

Skin Contact
Avoid contact with skin.

Inhalation
Harmful if inhaled.

Ingestion
May be harmful if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bicarbonate</td>
<td>= 4220 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>144-55-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>= 4090 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>497-19-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms
Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Serious eye damage/eye irritation
Causes serious eye irritation.

Carcinogenicity
Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document. 

Oral LD50  
4,173.60 mg/kg

ATEmix (inhalation-dust/mist)  
1.50 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bicarbonate</td>
<td>650: 120 h Nitzschia linearis mg/L EC50</td>
<td>8250 - 9000: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>2350: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>144-55-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>242: 120 h Nitzschia mg/L EC50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>497-19-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability
Not determined.

Bioaccumulation
There is no data for this product.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL considEATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>Corrosive</td>
</tr>
<tr>
<td>497-19-8</td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
Not regulated

IATA
Not regulated

IMDG
Not regulated
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA Status</th>
<th>TSCA Inventory Status</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bicarbonate</td>
<td>X</td>
<td>ACTIVE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>X</td>
<td>ACTIVE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IECSC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- **AICS** - Australian Inventory of Chemical Substances

US Federal Regulations

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**
This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Issue Date: 04-Mar-2009
Revision Date: 13-Aug-2019
Revision Note: Regulatory review

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet