SDS

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: **pH 4.01 Calibration Buffer, Red**

Product Code(s): P1001, P1212, CSP1001, D82-3070, SSP1212

Synonyms: Mixture.

Recommended Use: For manufacturing, industrial, and laboratory use only. Use as a laboratory reagent.

Uses Advised Against: Not for food, drug, or household use.

Supplier: Rocky Mountain Reagents, Inc.
4621 Technology Drive, Golden, CO 80403
Phone: (303) 762-0800 Fax: (303) 762-1240

Emergency Phone Number: For health emergency call poison control: (800) 222-1222.

2. HAZARDS IDENTIFICATION

Hazard Classifications: This product is classified as not hazardous under OSHA's Hazard Communication Standard, 29 CFR 1910.1200 (HCS) and the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). However, all chemicals handled and used in the workplace should be treated with caution.

Signal Word: Not applicable.

Hazard Statements: Not applicable.

Pictograms: Not applicable.

Precautionary Statements:

- **Prevention:** Not applicable.
- **Response:** Not applicable.
- **Storage:** Not applicable.
- **Disposal:** Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	Chemical Formula	% by Weight
Water	Water	7732-18-5	H_2O	98.9
Potassium Hydrogen Phthalate	Potassium Acid Phthalate	877-24-7	K $C_8H_5O_4$	1.01
Amaranth	Acid Red 27	915-67-3	$Na_3C_{20}H_{11}N_2O_{10}S_3$	0.0005
Sodium Hydroxide	Caustic Soda	1310-73-2	NaOH	0.001
Preservative	N/A	N/A	N/A	0.12

Trade Secret Statement: The specific name and formula of the component "Preservative" above have been withheld under a trade secret. This component is present at sufficiently low concentrations such that it does not significantly affect the hazard classification of this product.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician if symptoms occur.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a physician or poison control center if symptoms occur.

Skin Contact: Wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if symptoms occur.

Eye Contact: Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician if symptoms occur.

General Advice: Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that those providing first aid and medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Symptoms and Effects: Headache, nausea, vomiting, diarrhea. May cause irritation if swallowed, inhaled, or exposed to the skin or eyes.

Immediate Medical Care/ Special Treatment: Get medical attention if you feel unwell or are concerned. Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, dry powder, alcohol resistant foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream, as it may scatter and spread fire.

Hazardous Combustion Products: Sodium oxides, potassium oxides, carbon oxides.

Specific Hazards: Excessive thermal conditions may cause decomposition and yield hazardous combustion products listed above.

Special Protective Equipment/ Precautions for Firefighters: As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Collect spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Wear personal protective equipment (see Section 8). Limit exposure of product to air. Avoid contact with skin, eyes, and clothing. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area. Store in a segregated and approved area away from heat and incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Water:	No information found.	
Potassium Hydrogen Phthalate:	No information found.	
Amaranth:	No information found.	
Sodium Hydroxide:	OSHA (PEL):	2 mg/m^3
	ACGIH (TLV):	2 mg/m^3
Preservative:	No information found.	

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

Appearance: Pink, transparent liquid.

Odor: Odorless.

Odor Threshold: No information found.

Formula Weight: Mixture.

pH: 4.01 ± 0.01

Melting/Freezing Point: ≈ 0 °C

Boiling Point/Range: ≈ 100 °C

Decomposition Temperature: No information found.

Flash Point: Not applicable.

Auto-ignition Temperature: Not applicable.

Flammability: Not flammable.

Flammability/Explosive Limits: Not applicable.

Solubility: Miscible with water.

Vapor Pressure: No information found.

Vapor Density: No information found.

Specific Gravity: 1.01 (Water = 1)

Evaporation Rate: No information found.

Viscosity: No information found.

Partition Coefficient (n-octanol/water): No information found.

10. STABILITY AND REACTIVITY

Reactivity Data: No information found.

Chemical Stability: Stable under normal conditions. Sensitive to air.

Conditions to Avoid: Excessive heat, exposure to air, incompatible materials.

Incompatible Materials: Strong acids, strong bases.

Hazardous Decomposition Products: Sodium oxides, potassium oxides, carbon oxides.

Possibility of Hazardous Reactions: Excessive thermal conditions may yield hazardous decomposition products listed above.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Acute Effects: May cause irritation if swallowed, inhaled, or exposed to the skin or eyes.

Chronic Effects: No information found.

Toxicological Data:

Water:	No information found.	
Potassium Hydrogen Phthalate:	LD_{50} Oral, Rat:	3200 mg/kg
Amaranth:	LD_{50} Oral, Rat:	6000 mg/kg
	May cause mutagenic effects based on microorganism data.	
	May cause reproductive effects based on animal data.	
Sodium Hydroxide:	LD_{50} Dermal, Rabbit:	1350 mg/kg
	Corrosive to skin and eyes based on animal data.	
Preservative:	LD_{50} Oral, Rat:	2630 mg/kg
	LD_{50} Dermal, Rabbit:	5000 mg/kg
	Corrosive to skin and eyes based on animal data.	

Symptoms of Exposure: Irritation, headache, nausea, vomiting, diarrhea, abdominal pain.

Carcinogenic Effects: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC: Amaranth: 3 – Not classifiable for human

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

Water: No information found.

Potassium Hydrogen Phosphate:
No information found.

Amaranth:
No information found.

Sodium Hydroxide:

LC_{50}, Western Mosquitofish (Gambusia affinis):	125 mg/L 96 h
EC_{50}, Water Flea (Ceriodaphnia dubia):	34.59 - 47.13 mg/L 48 h

Preservative Active Ingredient:

LC_{50}, Rainbow Trout (Oncorhynchus mykiss):	0.19 mg/L 96 h
EC_{50}, Water Flea (Daphnia magna):	0.16 mg/L

Persistence and Degradability: This product is biodegradable and unlikely to bioaccumulate.

Environmental Effects: Not expected to be hazardous to the environment. However, the possibility of an environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL INFORMATION

Disposal Instructions: Dispose of this material and its container to an approved waste collection point. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers. All wastes must be handled in accordance with local, state, and federal regulations.

Contaminated Packaging: Because containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: No information found.

14. TRANSPORT INFORMATION

DOT: Not regulated.

Environmental Hazard Regulations: No information found.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is not considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)
Section 311 – Hazardous Chemical	No
Immediate Hazard	No
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

Section 313: No information found.

CERCLA Reportable Quantities: No information found.

International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Rocky Mountain Reagents, Inc. provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Rocky Mountain Reagents, Inc. makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Rocky Mountain Reagents, Inc. assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

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