

Safety Data Sheet

Buffer Solution pH 2

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Buffer Solution pH 2
Recommended Use: Science education applications
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING



Causes skin irritation. Causes serious eye irritation.

GHS Classification:

Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A

Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u> | <u>CAS #</u> | <u>%</u> |
|----------------------|--------------|----------|
| Water | 7732-18-5 | 99.56 |
| Potassium Chloride | 7447-40-7 | 0.37 |
| Hydrogen Chloride | 7647-01-0 | 0.07 |

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: 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: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Hydrogen chloride

Section 6 Spill or Leak Procedures

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Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Section 8 Protection Information

| Chemical Name | ACGIH | | OSHA PEL | |
|--------------------|-------|-----------------|----------|-----------------|
| | (TWA) | (STEL) | (TWA) | (STEL) |
| Potassium Chloride | N/A | N/A | N/A | N/A |
| Hydrogen Chloride | N/A | 2 ppm (Ceiling) | N/A | 5 ppm (Ceiling) |

Control Parameters

Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Respirator Type(s):

None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection. Wear chemical splash goggles when handling this product. Have an eye wash station available.

Eye Protection:

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9 Physical Data

Formula: See Section 3
Molecular Weight: No data available
Appearance: Colorless Liquid
Odor: No data available
Odor Threshold: No data available
pH: 2
Melting Point: Estimated 0 C
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: No data available N/A

Vapor Pressure: No data available
Evaporation Rate (BuAc=1): No data available
Vapor Density (Air=1): No data available
Specific Gravity: Approx. 1
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: 10
Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Water-reactive materials, Acids, Caustics (bases)
Hazardous Decomposition Products: Hydrogen chloride
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation and ingestion.

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Symptoms (Acute): No data available
Delayed Effects: No data available

Acute Toxicity:

| Chemical Name | CAS Number | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------|------------|--|-------------|---|
| Water | 7732-18-5 | Oral LD50 Rat 90000 mg/kg | | |
| Potassium Chloride | 7447-40-7 | Oral LD50 Rat 2600 mg/kg Oral LD50 Mouse 1500 mg/kg | | |
| Hydrogen Chloride | 7647-01-0 | Oral LD50 Rabbit 900 mg/kg | | INHALATION LC50 Rat 3700 ppm INHALATION LC50 Mouse 1108 ppm INHALATION LC50 Rat 45000 MG/M3 INHALATION LC50 Rat 8300 MG/M3 |

Carcinogenicity:

| Chemical Name | CAS Number | IARC | NTP | OSHA |
|--------------------|------------|------------|------------|------------|
| Potassium Chloride | 7447-40-7 | Not listed | Not listed | Not listed |
| Hydrogen Chloride | 7647-01-0 | Not listed | Not listed | Not listed |

Chronic Effects:

| | |
|------------------------------|---|
| Mutagenicity: | No evidence of a mutagenic effect. |
| Teratogenicity: | No evidence of a teratogenic effect (birth defect). |
| Sensitization: | No evidence of a sensitization effect. |
| Reproductive: | No evidence of negative reproductive effects. |
| Target Organ Effects: | |
| Acute: | No information available |
| Chronic: | No information available |

Section 12

Ecological Data

| | |
|-------------------------------|--|
| Overview: | This material is not expected to be harmful to the ecology. |
| Mobility: | This material is expected to have very high mobility in soil. It does not absorb to most soil types. |
| Persistence: | Dissolved into water, Evaporation into atmosphere, dissolved in water. |
| Bioaccumulation: | Bioconcentration is not expected to occur. |
| Degradability: | No data |
| Other Adverse Effects: | No data |

| Chemical Name | CAS Number | Eco Toxicity |
|--------------------|------------|---|
| Water | 7732-18-5 | No data available |
| Potassium Chloride | 7447-40-7 | Aquatic LC50 (96h) Bluegill Sunfish 1060 MG/L Aquatic EC50 (48h) Daphnia 825 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS 2500 MG/L 96 HR LC50 GAMBUSIA AFFINIS 282 MG/L [STATIC] |
| Hydrogen Chloride | 7647-01-0 | |

Section 13

Disposal Information

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|--------------------------------|---|
| Disposal Methods: | Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance. |
| Waste Disposal Code(s): | If discarded, this product is considered a RCRA corrosive waste, D002. |

Section 14

Transport Information

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| Ground - DOT Proper Shipping Name: Not regulated for transport by US DOT. | Air - IATA Proper Shipping Name: Not regulated for air transport by IATA. |
|---|---|

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Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

| Chemical Name | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|--------------------|------------|-------------------|------------|------------------------------------|-----------------------|---------------|
| Potassium Chloride | 7447-40-7 | No | No | No | No | No |
| Hydrogen Chloride | 7647-01-0 | Hydrochloric acid | 5000 lb RQ | 5000 lb final RQ; 2270 kg final RQ | 500 lb TPQ (gas only) | No |

Section 16

Additional Information

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Replaces: 09/03/2014

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

| | | | |
|--------|---|------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service Number | OSHA | Occupational Safety and Health Administration |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL | Permissible Exposure Limit |
| DOT | U.S. Department of Transportation | ppm | Parts per million |
| IARC | International Agency for Research on Cancer | RCRA | Resource Conservation and Recovery Act |
| N/A | Not Available | SARA | Superfund Amendments and Reauthorization Act |
| | | TLV | Threshold Limit Value |
| | | TSCA | Toxic Substances Control Act |
| | | IDLH | Immediately dangerous to life and health |