Buffer Solution, pH 2.00

MSDS # 126.00

Section 1: Product and Company Identification

Buffer Solution, pH 2.00

Synonyms/General Names: pH 2 Buffer
Product Use: For educational use only
Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers

CHEMTREC (USA): 800-424-9300 **CANUTEC (Canada): 613-424-6666**

ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

Clear, colorless liquid; no odor.

CAUTION! Body tissue irritant.
Target organs: None known

HMIS (0 to 4)

Health	1
Fire Hazard	0
Reactivity	0

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) if used properly.

Section 3: Composition / Information on Ingredients

Potassium Chloride, (7447-40-7), <1% .
Hydrochloric Acid, (7647-01), <1%.
Water, (7732-18-5), >99%.

Section 4: First Aid Measures

Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.
Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.
Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures

Noncombustible solution. When heated to decomposition, emits acrid fumes.
Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Contain spill with sand or absorbent material and place in sealed bag or container for disposal. Ventilate and wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage Green

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.
Storage: Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Exposure guidelines: Hydrochloric Acid: OSHA PEL: 5 mg/m^3 ceiling, ACGIH: TLV: N/A, STEL: 2.98 mg/m^3 ceiling.

Section 9: Physical and Chemical Properties

Molecular formula	N/A.	**Appearance**	Clear, colorless liquid.
Molecular weight	N/A.	**Odor**	No odor.
Specific Gravity	1.00 g/mL @ 20°C.	**Odor Threshold**	N/A.
Vapor Density (air=1)	0.7 (water).	**Solubility**	Complete.
Melting Point	Freezes @ ~ 0 °C.	**Evaporation rate**	N/A *(Butyl acetate = 1).*
Boiling Point/Range	~ 100°C.	**Partition Coefficient**	N/A *(log P_{OW}).*
Vapor Pressure (20°C)	N/A.	**pH**	2.0, acidic.
Flash Point:	N/A.	**LEL**	N/A.
Autoignition Temp.:	N/A.	**UEL**	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture.
Stability: Stable under normal conditions of use and storage.
Incompatibility: Acids, alkalis,
Shelf life: Indefinite if stored properly.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: ***Eyes***: Redness, tearing, itching, burning, conjunctivitis. ***Skin***: Redness, itching. ***Ingestion***: Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. ***Inhalation***: Irritation of mucous membranes, coughing, wheezing, shortness of breath,
Chronic Effects: No information found.
Sensitization: none expected
Hydrochloric Acid: LD50 [oral, rabbit]; 900 mg/kg; LC50 [rat]; 3124 ppm (1 hour); LD50 Dermal [rabbit]; N/A
Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Ecological impact has not been determined.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information

DOT Shipping Name:	Corrosive liquid, n.o.s., (Hydrochloric Acid).	**Canada TDG:**	Corrosive liquid, n.o.s., (Hydrochloric Acid).
DOT Hazard Class:	8, pg III.	**Hazard Class:**	8, pg III .
Identification Number:	UN1760.	**UN Number:**	UN1760.

Section 15: Regulatory Information

EINECS: Not listed .
TSCA: All components are listed or are exempt.
WHMIS Canada: Not WHMIS Controlled.
California Proposition 65: Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: January 23, 2009