Anachemia

255 Norman.
Lachine (Montreal), Que
H8R 1A3

Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)
(USA) Anachemia : 1(518) 297-4444
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: E		TDG CLASS: 8 PIN: UN1760 PG: II
		

Section I. Product Identification and Uses

Product name	**BUFFER SOLUTION pH 2.00**
Chemical formula	Not applicable.
Synonyms	R-1160, 15206
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3
Material uses	For laboratory use only.

CI#	Not available.
CAS#	Not applicable.
Code	R-1160
Formula weight	Not applicable.
Supersedes	

Section II. Ingredients

Name	CAS #	%	TLV
1) HYDROCHLORIC ACID	7647-01-0	1-<5	Exposure limit: ACGIH Ceiling limit 2 ppm (3 mg/m3)
2) SODIUM ACETATE TRIHYDRATE	6131-90-4	1-5	Not established by ACGIH
3) WATER	7732-18-5	Balance	Not established by ACGIH

Toxicity values of the hazardous ingredients

HYDROCHLORIC ACID:
ORAL (LD50): Acute: 900 mg/kg (Rabbit).
VAPOR (LC50): Acute: 3124 ppm (Rat) (1 hour(s)). 1108 ppm (Mouse) (1 hour(s)).
VAPOR (LCLo): Acute: 1300 ppm (Human) (30M).
SODIUM ACETATE:
ORAL (LD50): Acute: 3530 mg/kg (Rat). 6891 mg/kg (Mouse).
SUBCUTANEOUS (LD50): Acute: 3200 mg/kg (Mouse).

Section III. Physical Data

Physical state and appearance / Odor	Colorless fuming liquid with a pungent odor.
pH (1% soln/water)	Product = 1.05
Odor threshold	Not available.
Percent volatile	>90% (V/V)
Freezing point	Not available.
Boiling point	Not available.
Specific gravity	Not available.
Vapor density	Not available.
Vapor pressure	Not available.
Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	Not applicable.
Flammable limits	Not applicable.
Auto-ignition temperature	Not available.
Fire degradation products	Hydrogen chloride gas. Oxides of carbon and sodium.
Fire extinguishing procedures	Use extinguishing media suitable for surrounding materials. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out. DO NOT get water inside container.
Fire and Explosion Hazards	Flammable/explosive hydrogen gas may be formed upon contact of this product with metals. The sensitivity to static discharge is not available. The sensitivity to impact is not available. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Corrosive. Target organs: skin, eyes, lungs, respiratory system. 50 ppm (HYDROCHLORIC ACID) is immediately dangerous to life or health.
Eye	Vapors, liquids and mists are extremely corrosive to the eyes. Brief contact of the vapors will be severely irritating. Brief contact of the liquid or mist will severely damage the eyes and prolonged contact may cause permanent eye injury which may be followed by blindness.
Skin	Causes severe burns. Severe pain and brownish or yellow stains: usually penetrates the full thickness of the skin. Lesser exposures may cause dermatitis and photosensitization.
Inhalation	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, laryngitis, dyspnea, headache, nausea, and vomiting. Can cause lung damage.
Ingestion	Burns in mouth, pharynx and gastrointestinal tract. Weakness from falling blood pressure, nausea, vomiting, dysphagia, abdominal pain, cardiovascular collapse, convulsions, coma and death possible. Asphyxia may occur from edema of the glottis.

Section V. Toxicological Properties

Effects of Chronic Overexposure	Erosion of the teeth, ulceration of the nose, mouth and gums, bronchitis. Repeated or prolonged skin contact may cause dermatitis. Carcinogenic effects: Not available. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact	Immediately flush eyes with copious quantities of water for at least 30 minutes holding lids apart to ensure flushing of the entire surface. Do not use chemical antidotes. Speed is essential. Seek immediate medical attention.
Skin contact	Immediately flush skin with plenty of water for at least 30 minutes while removing contaminated clothing and shoes. Do not use chemical antidotes. Speed is essential. Seek immediate medical attention. Wash contaminated clothing before reusing. Discard contaminated leather articles such as shoes and belt.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.
Ingestion	If conscious, wash out mouth with water. Have conscious person drink several glasses of water or milk, repeating if vomiting. DO NOT induce vomiting. Aim to dilute acid 100 times approximately. Seek immediate medical attention. Never give anything by mouth to an unconscious person.

Section VII. Reactivity Data

Stability	Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Not available.
Incompatibility	Reacts with most common metals to produce hydrogen. Amines, metal oxides, acetic anhydride, beta-propiolacetone, vinyl acetate, mercuric sulfate, calcium phosphide, formaldehyde, alkalis, carbonates, bases, sulfuric acid, chlorosulfonic acid, nitric acid, oxidizing agents, cyanides, sulfides, fluorides, phosphides, acetylides, bromides, carbides, silicides, hydroxides, propylene oxide, fluorine, water reactive materials, silver perchlorate, carbon tetrachloride, perchloric acid, 2-aminoethanol, ammonium hydroxide, ethylenediamine, ethyleneimine, oleum, copper and aluminum and their alloys, alkali metals, sulfites.
Reaction Products	Will corrode a wide variety of metals. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Full suit.
Spill and leak	Evacuate and ventilate the area. Cover with soda ash or lime. This will release carbon dioxide, so use caution. Place in a suitable container and mark for disposal. Wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch spilled material.
Waste disposal	According to all applicable regulations.
Storage and Handling	Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. May corrode metallic surfaces. Wear suitable protective clothing. Take off immediately all contaminated clothing. Protect from moisture. Do not use pressure to dispense. Empty containers may contain a hazardous residue. Handle and open container with care. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling.

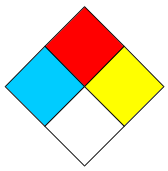
Section IX. Protective Measures

Protective clothing	Face shield and splash goggles. Impervious gloves (neoprene), apron, coveralls, and/or other resistant protective clothing as required for workplace conditions to prevent contact with hydrochloric acid solutions. Sufficient to protect skin. None required if handled in closed ventilation system. Where required (leak, spill, open handling of liquid) use a NIOSH-approved chemical cartridge respirator for gas below 50 ppm. For gas above 50 ppm or mist, use NIOSH approved self-contained breathing apparatus or air-supplied respirator, both with full facepieces. Have available and use as appropriate: suits, aprons, and boots. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.
Engineering controls	Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments

Corrosive! Toxic! Causes severe burns! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Handle and open container with care.
RTECS NO: MW4025000 (Hydrochloric acid).
RTECS NO: AJ4300010 (Sodium acetate).



NFPA

Prepared by MSDS Department/Département de F.S..

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