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: D-2A		Not controlled under TDG (Canada). PIN: Not applicable. PG: Not applicable.
		

Section I. Product Identification and Uses

Product name	**BUFFER SOLUTION pH 10.00 COLORED BLUE**
Chemical formula	Not applicable.
Synonyms	R-1280CB, 15245
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3
Material uses	For laboratory use only.

CI#	Not available.
CAS#	Not applicable.
Code	R-1280CB
Formula weight	Not applicable.
Supersedes	

Section II. Ingredients

Name	CAS #	%	TLV
1) BORIC ACID	10043-35-3	0.1-1	Exposure limits: ACGIH TWA 2 mg/m3; STEL 6 mg/m3.
2) POTASSIUM CHLORIDE	7447-40-7	0.1-1	Not established by ACGIH
3) SODIUM HYDROXIDE	1310-73-2	0.1-1	Exposure limits: ACGIH Ceiling limit 2 mg/m3
4) WATER	7732-18-5	Balance	Not established by ACGIH

Toxicity values of the hazardous ingredients

BORIC ACID:
ORAL (LD50): Acute: 2660 mg/kg (Rat). 3450 mg/kg (Mouse).
POTASSIUM CHLORIDE:
ORAL (LD50): Acute: 2600 mg/kg (Rat). 1500 mg/kg (Mouse).
INTRAVENOUS (LD50): Acute: 142 mg/kg (Rat). 117 mg/kg (Mouse).
INTRAPERITONEAL (LD50): Acute: 660 mg/kg (Rat). 620 mg/kg (Mouse).
SODIUM HYDROXIDE:
INTRAPERITONEAL (LD50): Acute: 40 mg/kg (Mouse).

Section III. Physical Data

Physical state and appearance / Odor	Blue liquid.
pH (1% soln/water)	Product = 10.00 @ 25°C
Odor threshold	Not available.
Percent volatile	>90%
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 available.
Auto-ignition temperature	Not available.
Fire degradation products	Oxides of boron, sodium, and potassium. Hydrogen chloride Oxydes de bore, de sodium et de potassium. Chlorure d'hydrogène.
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.
Fire and Explosion Hazards	The sensitivity to impact is not applicable. The sensitivity to static discharge is not applicable. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Irritant. Target organs: eyes, skin, respiratory system. 10 mg/m3 (SODIUM HYDROXIDE) is immediately dangerous to life or health.
Eye	Causes severe irritation. Prolonged contact may cause severe burns and loss of vision.
Skin	Contact with liquid can cause severe irritation or burns. Skin absorption through damaged skin of boric acid: absorbed into bloodstream in toxic amounts may cause erythema, macular rash, and central nervous system effects after 24 hours. See ingestion.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract. Inhalation of the spary mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.
Ingestion	May cause burns to mouth, throat and stomach. Ingestion of large amounts of boric acid may cause gastrointestinal distress, erythema, macular rash, weakness, nausea, headache, vomiting, diarrhea, dizziness, cyanosis, tachycardia, circulatory collpase and may lead to death. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams of boric acid.

Section V. Toxicological Properties

Effects of Chronic Overexposure	Boric acid: May cause anorexia, vomiting, diarrhea, convulsions, anemia. Reproductive effects: no symptoms have been noted in humans. Animal studies show that ingestion of large amount of borates over prolonged periods of time cause a decrease in sperm production and testicle size in male laboratory animals and developmental effects such as weight loss in fetuses of pregnant female laboratory animals. Embryotoxic and/or foetotoxic in animal. Passes through the placental barrier in animal. Excreted in maternal milk in human. Liver, central nervous system and kidney damage. Medical conditions which may be aggravated: Individuals with preexisting diseases of the skin, eye, liver or kidney may be more susceptible to the toxicity of overexposure to this product. Carcinogenic effects: Not available. Mutagenic effects: 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 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reusing.
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 to dilute. Call a physician. Never give anything by mouth to an unconscious or convulsing person.

Section VII. Reactivity Data

Stability	Unstable. Absorbs carbon dioxide from air. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Not available.
Incompatibility	May react with : Acids, flammable/combustible materials, organic materials, peroxides, organohalogen compounds, nitro and chloro organic compounds, metal alkalis, acetic anhydride, phosphorus. May cause violent polymerization with: acroleine, acrylonitrile, acetaldehyde.
Reaction Products	Protect from undue contact with the atmosphere as the pH value is subject to alteration upon absorption of carbon dioxide. 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.
Spill and leak	Evacuate the area. Absorb on sand or vermiculite and place in a closed container for disposal. Ventilate area and 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 at controlled room temperature (15-30°C). 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 container tightly closed and dry. Manipulate under an adequate fume hood. Empty containers may contain a hazardous residue. Handle and open container with care. This product must be manipulated by qualified personnel. 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.

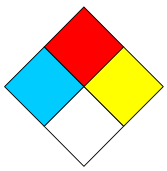
Section IX. Protective Measures

Protective clothing	Splash goggles. Impervious gloves, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. If use conditions generate vapors or mists, wear a NIOSH-approved respirator appropriate for those emission levels. Appropriate respirators may be a full facepiece or a half mask air-purifying cartridge respirator equipped for organic vapors/mists, a self-contained breathing apparatus in the pressure demand mode, or a supplied-air respirator. 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	Local mechanical exhaust ventilation capable of minimizing emissions at the point of use. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments

Harmful liquid! Reproductive toxin! Irritant! Prolonged exposure may result in skin 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. Container should be opened only by a technically qualified person.
Synergistic materials: Not available.
RTECS NO: ED4550000 (Boric acid).
RTECS NO: WB4900000 (Sodium hydroxide).
RTECS NO: TS8050000 (Potassium chloride).



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

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