



Emergency Contact (24 hr) -- CHEMTREC®
Domestic: 800-424-9300
International: 703-527-3887

WATER HARDNESS BUFFER

Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Catalog Number:

BDH0002, BDH0004

Product Identity:

WATER HARDNESS BUFFER

Manufacturer's Name:

RICCA CHEMICAL COMPANY LLC

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CAGE Code: 0V553

Address:

448 West Fork Dr
Arlington, TX 76012

Telephone Number For Information:

817-461-5601

Date Prepared:

11/01/2006

Revision: 0

Last Revised: 11/01/2006

Section 2. Composition/Information on Ingredients

Component	CAS Registry #	Concentration	ACGIH TLV	OSHA PEL
Ammonium Chloride	12125-02-9	6-8	Not Available	Not Available
			10 mg/m3	Not Available
Ammonium Hydroxide	1336-21-6	55-60	25 ppm	50 ppm
			17 mg/m3	35 mg/m3
Ethylenediaminetetraacetic Acid (EDTA) Disodium Dihydrate	6381-92-6	<1	Not Available	Not Available
			Not Available	Not Available
Water, Deionized	7732-18-5	Balance	Not Available	Not Available
			Not Available	Not Available
Magnesium Chloride Hexahydrate	7791-18-6	<1	Not Available	Not Available
			Not Available	Not Available

Section 3: Hazard Identification

Emergency Overview: WARNING! Hazardous fumes and liquid. Use with adequate ventilation. Avoid breathing vapor. Avoid contact with skin, eyes or clothing.



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Do not pipet by mouth. If ingested, give large quantity of water. Do not induce vomiting. Call a physician. Wash areas of contact with plenty of water for at least 15 minutes. For eyes, get medical attention.

Target Organs: eyes, skin, respiratory system.

Eye Contact: May cause severe burns and permanent damage.

Inhalation: Causes irritation of the respiratory tract. Higher concentrations can cause burns, pulmonary edema and death. Brief exposure to 5000 ppm can be fatal.

Skin Contact: May cause serious damage to the skin. Effects may include redness, pain, skin burns.

Ingestion: May cause corrosion to the esophagus and stomach with perforation and peritonitis. Symptoms may include pain in the mouth, chest and abdomen, with coughing, vomiting and collapse. Ingestion of as little as 3-4 mL may be fatal.

Chronic Effects/Carcinogenicity: None

IARC - No.

NTP - No.

OSHA - No.

Reproductive Information: Not Applicable.

Teratology (Birth Defect) Information: Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Ammonium Chloride. Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Ammonium Hydroxide. Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Magnesium Chloride Hexahydrate. Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Ethylenediaminetetraacetic Acid (EDTA) Disodium Dihydrate.

Section 4: First Aid Measures - In all cases, seek qualified evaluation.

Eye Contact: Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Skin Contact: Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Ingestion: Do not induce vomiting. Give large quantity of water. Call a physician immediately.

Section 5: Fire Fighting Measures

Flash Point: Not Available.

Method Used: Not Available.

LFL: Not Available.

UFL: Not Available.

Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

Fire & Explosion Hazards: Flammable vapors may accumulate in confined spaces.

Fire Fighting Instructions: Use normal procedures/instructions.

Fire Fighting Equipment: Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Ventilate area of leak or spill. Cover spill with a 1:1:1 mixture by weight of Sodium Carbonate or Calcium Carbonate, clay and sand. Scoop mixture into a plastic container and, in the fume hood, add to a pail of cold water. Neutralize this mixture with 5% Hydrochloric Acid, let stand overnight, then pour the liquid into the drain while flushing with water. Dispose of any solid with normal refuse. Wash the area of the spill with plenty of water.

Section 7. Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store below 25 °C. Empty containers may be hazardous since they retain product residues.

Safety Storage Code: Corrosive

Section 8: Exposure Control/Personal Protection

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

Respiratory Protection: If the TLV is exceeded, a full-face chemical cartridge respirator may be worn up to 50 times the TLV or the maximum use concentration specified by the respirator supplier, whichever is less.



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Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

Section 9: Physical and Chemical Properties

Appearance: Clear, colorless liquid

Odor: characteristic ammonia odor

Solubility in Water: Infinite

Specific Gravity: Approximately 0.97

pH: Alkaline

Boiling Point(°C): Not Available.

Melting Point(°C): Not Available.

Vapor Pressure: Not Applicable.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.

Incompatibility: Strong oxidizers, acids, Calcium Hypochlorite bleaches, gold, mercury, silver, halogens.

Hazardous Decomposition Products: Burning may produce ammonia and nitrogen oxides.

Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

LD50, Oral, Rat: 350 mg/kg (Ammonium Hydroxide), gastrointestinal, liver, kidney, ureter, bladder changes. LDLo, Oral, Human: 43 mg/kg (Ammonium Hydroxide), LCLo, Inhalation, Human: 5000 ppm (Ammonium Hydroxide), details of toxic effects not reported other than lethal dose value. LD50, Oral, Rat: 2000 mg/kg (EDTA Disodium anhydrous), 1650 mg/kg (Ammonium Chloride), 8100 mg/kg (Magnesium Chloride Hexahydrate), details of toxic effects not reported other than lethal dose value.

Section 12. Ecological Information

Ecotoxicological Information: This material is expected to be very toxic to aquatic life.

Chemical Fate Information: This material is not expected to significantly bioaccumulate.

Section 13. Disposal Considerations

Ventilate area of leak or spill. Cover spill with a 1:1:1 mixture by weight of Sodium Carbonate or Calcium Carbonate, clay and sand. Scoop mixture into a plastic container and, in the fume hood, add to a pail of cold water. Neutralize this mixture with 5% Hydrochloric Acid, let stand overnight, then pour the liquid into the drain while flushing with water. Dispose of any solid with normal refuse. Wash the area of the spill with plenty of water. Always dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

Part Numbers: BDH0002-55GL, BDH0004-20L

D.O.T. Shipping Name: Ammonia Solution

D.O.T. Hazard Class: 8

U.N. / N.A. Number: UN2672

Packing Group: III

D.O.T. Label: 8





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Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)

OSHA Status:These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

TSCA Status:All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

Sara Title III:

Section 302 Extremely Hazardous Substances:Not Applicable.

Section 311/312 Hazardous Categories:Acute, Chronic, Fire: Yes; Pressure, Reactivity: No

Section 313 Toxic Chemicals:Not Applicable.

California: None Reported.

Pennsylvania: Ammonium Chloride is listed as an Environmental Hazard on the state's Hazardous Substances List. Ammonium Hydroxide is listed as an Environmental Hazard on the state's Hazardous Substances List. Ethylenediaminetetraacetic Acid (EDTA) Disodium Dihydrate is listed as an Environmental Hazard on the state's Hazardous Substances List.

RCRA Status: Not Applicable.

CERCLA Reportable Quantity: Ammonium Chloride - 5,000 pounds. Ammonium Hydroxide - 1,000 pounds. Ethylenediaminetetraacetic Acid (EDTA) Disodium Dihydrate - 5000 pounds.

WHMIS: E: Corrosive Material.



Section 16. Other Information

NFPA Ratings:

Health: 2 Flammability: 0 Reactivity: 0 Special Notice Key:None

HMS Ratings:

Health: 2 Flammability: 0 Reactivity: 0 Protective Equipment:B (Protective Eyewear, Gloves)

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.

