MATERIAL SAFETY DATA SHEET

I. GENERAL INFORMATION ---------------------------------------
Code, Trade Name: HA7405, Hardness Buffer
Chemical Name: Ammonium Hydroxide/Chloride in Water
Chemical Family: Inorganic Base & Salt in Water

II. HAZARDOUS INGREDIENTS -------------------------------------
* Ammonium Hydroxide, CAS #1336-21-6 <15% W/V (as NH3)
  TLV/PEL: 25 ppm  TXDS: orl-hmn LDLo: 43 mg/kg
  Carcinogenicity: Not listed (IARC).
Ammonium Chloride, CAS #12125-02-9 7% W/V
  TLV/PEL: 10 mg/m3  TXDS: orl-rat LD50: 1650 mg/kg
  Carcinogenicity: Not listed (IARC).
Water, CAS #7732-18-5 > 78% W/V

III. HEALTH HAZARD DATA ---------------------------------------
Harmful if swallowed or inhaled. Burns eyes, skin, nasal and respiratory passages on contact. Vapor irritates eyes and respiratory passages. Severe eye hazard!
Routes of Entry: Ingestion, Inhalation, Skin Contact.

First Aid:
Eyes: Flush with water for at least 15 min; get immediate medical assistance.
Skin: Remove contaminated clothing and wash with soap and water.
Inhalation: Move to fresh air & give artificial respiration if breathing has stopped.
Ingestion: Do not induce vomiting, if conscious give water and get medical attention.

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVER EXPOSURE!

IV. PHYSICAL DATA ---------------------------------------------
Boiling Point: N/A  Specific Gravity: N/A
Vapor Density: N/A
Water Solubility: Miscible
Appearance & Odor: Clear liquid with pungent odor.

V. FIRE & EXPLOSION HAZARD DATA ------------------------------
Flash Point: Nonflammable
Extinguishing Media: Media suitable for surrounding material.
Special Procedures: Wear self contained breathing apparatus and protective clothing if necessary.
Unusual Fire & Explosion Hazards: Emits toxic fumes.

VI. REACTIVITY DATA --------------------------------------------
Conditions To Avoid: Heat, acids, & oxidizers.
Hazardous Combustion & Decomposition Products: Toxic fumes.

VII. SPECIAL PROTECTION ---------------------------------------
Provide adequate general and local exhaust ventilation.
Protect eyes and skin with safety goggles and gloves.
Do not get in eyes, on skin or clothing.
Wear self contained breathing apparatus in high vapor areas.
Do not breathe vapors or mist.

VIII. HANDLING AND STORAGE PRECAUTIONS -----------------------
Keep container tightly closed.
Store in cool, dry, well ventilated area.
Keep away from ignition source, acids, oxidizers.
Wash thoroughly after handling.
Empty containers may be hazardous due to retained residue.

IX. ENVIRONMENTAL PROTECTION --------------------------------
Spill Response: Absorb with sand or vermiculite and scoop up and containerize for proper disposal.
Waste Disposal: Comply with all local, state and federal regulations.

* Toxic chemical or chemicals subject to the reporting requirements of Section 313, SARA Title III.

The above information is to be used only as a guide, and does not profess to be all inclusive. Cascade Water Services shall not be held liable for any damage resulting from the handling or contact with the above product.

N/A = Not Available
Issue Date: 12/03
Revised: