

MATERIAL SAFETY DATA SHEET

SECTION I - MANUFACTURER'S INFORMATION

Manufacturer's Name: Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152

Emergency Telephone No.: 301-472-4340

Chemical Name and Synonyms: aqueous solution of ammonium hydroxide
(CAS No. 1336-21-6), ammonium chloride
(CAS No. 12125-02-9) and ammonium sulfide
(CAS No. 12135-76-1)

Trade Name and Synonyms: Hardness Buffer

Chemical Family: alkaline buffer

SECTION II - HAZARDOUS INGREDIENTS: Listed Below X Not Applicable

<u>Component</u>	<u>Percentage</u>	<u>Hazard</u>
ammonium hydroxide	25	corrosive alkali
ammonium sulfide	0.5	harmful vapor

SECTION III - PHYSICAL DATA

Boiling Point(F): 120-140 Specific Gravity: .970

Vapor Pressure(mm Hg): 143 Percent Volatile By Volume: 92

Vapor Density (Air=1): .6 Solubility in Water: complete

Appearance and Odor: colorless or yellow solution, strong ammonia and sulfide odor

SECTION IV - FIRE & EXPLOSION DATA: Listed Below X Not Applicable

Flash Point(Method Used): NA

Flammable Limits: Lel: 16 as NH3 gas Uel: 27 as NH3 gas

Extinguishing Media: NA

Special Fire Fighting Procedures & Unusual Fire and Explosion Hazards:

At high temperatures will emit toxic fumes of SOx, NOx, NH3, H2S, and HCl. Stay upwind and use water spray to knock down vapors. Rubber protective clothing, face shield, and self-contained breathing apparatus required.

SECTION V - HEALTH HAZARD DATA: Listed Below X Not Applicable

Threshold Limit Value: 25 ppm as NH₃, 10 ppm as H₂S

TXDS: NH₄OH - LDLo (orl-hmn): 43 mg/kg LD50 (orl-rat): 350 mg/kg
H₂S - LCLo (ihl-hmn): 600 ppm/30M
NH₃ - LCLo (ihl-hmn): 30000 ppm/5M

Effects of Overexposure:

Vapor irritating to eyes, mucous membranes, and upper respiratory tract. Liquid irritating to skin and eyes and has the potential to cause severe burns. If ingested will cause severe irritation and pain of mouth, esophagus, and stomach with possible constricting of the throat, coughing, vomiting, and breathing difficulty.

Emergency and First Aid Procedures:

Remove from area. Seek medical attention if exposure is prolonged. If splashed in eyes, flush with copious amounts of water for 15 minutes and get immediate medical attention. For contact with skin, flush area with water for 15 minutes while removing contaminated clothing. Wash area well with soap and water. If irritation persists, seek medical attention. If swallowed, call physician at once. DO NOT INDUCE VOMITING. If conscious, give large amounts of water. Follow with milk or raw egg whites beaten in water. If breathing difficult, administer oxygen and call physician.

SECTION VI - REACTIVITY DATA:

Stable in the container. When opened, emits irritating and unpleasant vapors of ammonia and hydrogen sulfide. Protect from temperature extremes and contact with other chemicals. Reacts with acids, strong oxidizers, zinc and other metals, and silver salts. Do not evaporate to dryness.

SECTION VII - SPILL OR LEAK PROCEDURES:

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area. Absorb with vermiculite, or other inert material and containerize for later disposal.

Waste Disposal Method:

Dispose of by methods approved of by local, state, or federal regulations.

SECTION VIII - SPECIAL PRECAUTIONS:

Store in cool, well-ventilated area. Large containers should be opened in fume hood, but dropper bottles can be opened without undue precaution. Unnecessary or prolonged exposure to vapors should be avoided. Rubber gloves, goggles or safety glasses, and lab coat or, preferably, rubber apron should be worn when handling.

This Material Safety Data Sheet has been prepared in accordance with 29 CFR Part 1910.1200. It contains information that we believe to be true and complete at the date of preparation. However, no warranty is expressed or implied. Advice given under "Waste Disposal" assumes compliance with Federal, State and Local regulations regarding the disposal of hazardous waste.

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Chief Chemist
Title

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