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MATERIAL SAFETY DATA SHEET

June 1, 2007

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Common Name: FINAL ETCH 5

Trade Name: Final Etch Type 5

Manufacturer: Old Bridge Metals & Chemicals, Inc.
P.O. Box 194
Old Bridge, New Jersey 08857

Telephone: (732) 727-2229
Emergency Telephone: (800) 275-3924
24 Hour Emergency Telephone: (800) 424-9300 (Chemtrec)

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION I. MATERIAL IDENTIFICATION

Trade Name: Final Etch 5
CAS Number: 1336-21-6
Formulation:
 Ammonia: 10% or Less
 Ammonium Chloride: Less than 25%
 Ammonium Carbonate: Less than 5%
 Water: Balance

SECTION II. PHYSICAL DATA

Physical State: Liquid
Boiling Point: 172° F to 176° F
Vapor Density: 0.6 (air = 3)
Specific Gravity: 1.02
Solubility in H₂O: Complete
Evaporation Rate: Less than 1 (But. Acetate +1)
Appearance: Clear light blue solution.
Odor: Strong ammonia odor.

SECTION III. FIRE AND EXPLOSION DATA

Flash Point: None
Flammable Limits
(Ammonia Vapor): 16 (Lel)
25 (Uel)
Extinguishing Media: Water, dry chemical, Carbon Dioxide.
Special Fire Fighting Instructions: Product is corrosive to metals.
Fire and Explosion Hazards: May form ammonia fumes when heated.

SECTION IV. REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Cold temperatures will cause crystallization.
Incompatibility: Acids.
Hazardous Decomposition Products: Ammonia gas
Polymerization: Will not occur.

SECTION V. HEALTH AND HAZARD INFORMATION

Threshold Limit Value: 25 ppm Ammonia vapor ACGIH. Short Term (STEL): 35 ppm.
Effects of Overexposure: Irritation of eyes, conjunctivitis, swelling of eyelids, irritation of the nose and throat, coughing, shortness of breath, vomiting.
Emergency Procedures: Remove person from vapors to fresh air. Flush eyes with plenty of water for 15 minutes. Call a physician. Wash skin with soap and plenty of water. If ingested, call a physician or Poison Control Center. Do not induce vomiting.

This product contains Ammonium Hydroxide, Ammonium Chloride, and Ammonium Carbonate subject to the reporting requirements of Section 13 of the Emergency Planning and Community-right-to-Know-Act of 1986 (40CFR372).

SECTION VI. SPECIAL PROTECTION INFORMATION

Personal Protective Equipment: Canister gas mask. Neoprene gloves, Neoprene apron, rubber boots.
Ventilation: Mechanical blower is usually required. Provide adequate ventilation. Keep solution enclosed.

SECTION VII. SPILL OR LEAK PROCEDURES

Spills and Leaks: Comply with Federal, State and local regulations on reporting spills. Use water spray to reduce vapors. Flush with plenty of water. Keep away from metals, including steel. Dike and absorb with dirt or sand.
Waste Disposal: Neutralize with dilute vinegar or return to Old Bridge Metals & Chemicals, Inc. or dispose of in accordance with Federal, State and local regulations.

SECTION VIII. SPECIAL PRECAUTIONS

Storage: Do not store in temperatures below 60° F or crystallization will occur. Store away from heat or sunlight. Store in plastic drums or plastic storage tanks.

Other Precautions: Loosen caps with caution and remember that odor is quite pungent.

Additional Precautions: Silver may react with anhydrous ammonia thereby forming silver azide or silver fulminate under proper conditions which are not fully understood. This formation can occur with or without the presence of organic compounds. Explosions have occurred when conditions prevailed that were considered contra to the formation of these explosive compounds.

SECTION IX. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with Federal, State and local laws.

U.S. REGULATIONS: SARA 313 Information; This product contains the following substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Ammonia:	Less than 10%
Ammonium Chloride:	Less than 25%
Ammonium Carbonate:	Less than 5%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category:

AN IMMEDIATE HEALTH HAZARD

SECTION X. SHIPPING INFORMATION

DOT Hazard Class Corrosive

DOT Shipping Name: Corrosive Liquid, Basic, Inorganic, NOS
(Ammonium Hydroxide & Ammonium Chloride) 8,
UN3266, III, ERG 154

SECTION XI. MSDS PREPARATION INFORMATION

Prepared by: Stephen Wolenuk
Laboratory Director