MATERIAL SAFETY DATA SHEET

SECTION I - COMPANY AND PRODUCT INFORMATION

NFPA Rating: Health: 2 Flammability: 0 Reactivity: 1 Special: IRRITANT

DOT Proper Shipping Name:.... CONSUMER COMMODITY DOT ID Number:..... UN 1789 DOT Hazard Class:.... ORM-D Package Group:..... III

SECTION II - PRODUCT COMPOSITION

HAZARDOUS INGREDIENTS:

HYDROCHLORIC ACID..... 14 - 15%

NONHAZARDOUS INGREDIENTS:

SECTION III - PHYSICAL DATA

FREEZING POINT N/A	DECOMPOSITION TEMPERATURE N/A
BOILING POINT 140° F	BULK DENSITY (loose) N/A
SPECIFIC GRAVITY $(H_2O) = 1$) 1.072	pH (in 1% solution) Less than 1
VAPOR PRESSURE (cm Hg.) 25 mm 11g.	MOLECULAR WEIGHT 36.461
PERCENT VOLATILE BY VOLUME 0	ODOR Slight odor.
EVAPORATION RATE (=1) N/A	APPEARANCE Clear - light yellow
VAPOR DENSITY (Air = 1) 11.0	liquid.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... None
FLAMMABLE LIMITS..... N/A
EXTINGUISHING MEDIA..... Non-Flammable
SPECIAL FIRE FIGHTING PROCEDURES:
Wear positive pressure self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Hydrochloric acid is non-flammable. Acid action on most metals may
release Hydrogen, a highly flammable and explosive gas.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE:...... 5 ppm as Hydrogen Chloride **EFFECTS OF OVEREXPOSURE: EYE**- severe irritation with corneal injury which may result in blindness. **SKIN** - severe irritation. **INGESTION** - may cause gastrointestinal irritation or ulceration and severe burns of the

mouth and throat. INHALATION - severe irritation.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Wash with water for 15 minutes and get medical attention promptly. **INGESTION:** Do not induce vomiting; if conscious, give large amounts

of water. Follow with milk of magnesia, beaten eggs, or vegetable oil. Call physician immediately. **INHALATION**: Remove to fresh air if effects occur. If respiration difficulties occur, call a physician immediately. **SKIN**: Flush with water for 15 minutes. Call a physician.

SECTION VI - REACTIVITY DATA

STABILITY: This product is stable. CONDITIONS TO AVOID Heat. Contact with metals may cause generation of flammable concentrations of hydrogen gas. INCOMPATIBILITY: (Materials to avoid) Avoid basic, alkalis and corrosive materials. Avoid contact with most metals. Avoid oxidizing material can oxidize to chlorine. HAZARDOUS DECOMPOSITION PRODUCTS:.... None HAZARDOUS POLYMERIZATION:...... WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE OF MATERIAL RELEASED OR SPILLED: Small quantities may be flushed with copious quantities of water; in case of larger amounts, contain liquid. Use limestone, lime or soda ash to cautiously neutralize and absorb. Place in a closed container

outdoors to await proper disposal. Be extremely cautious when handling since considerable amounts of heat and vapors may be generated during neutralization.

WASTE DISPOSAL METHOD:

Comply with all local, state, and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: (Specify type) Where required to maintain exposure levels before exposure limits use a NIOSH/MSHA approved respirator for hydrogen chloride gas, or hydrogen chloride mists as applicable. VENTILATION: Adequate ventilation. Avoid breathing vapor/fumes. LOCAL EXHAUST: If possible MECHANICAL: If possible . PROTECTIVE GLOVES: Rubber, Neoprene or vinyl gloves. EYE PROTECTION: Use chemical goggles OTHER PROTECTIVE EQUIPMENT: Chemical splash goggles and face shield as a minimum. Acid resistant apron.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Prevent all contact with eyes and skin. Avoid breathing irritating vapors. **OTHER PRECAUTIONS:** None Known

This data is offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

Revision/Reveiw Date: March 22, 2011 By: Dana Wm. Somesla, Chemist

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