



MATERIAL SAFETY DATA SHEET

DEFINITION OF ABBREVIATIONS:
 N/A: NOT APPLICABLE
 UNK: UNKNOWN
 N/E: NOT ESTABLISHED

SECTION I

MANUFACTURER:

MISCO INTERNATIONAL, INC.
 115 Messner Dr., Wheeling, Illinois 60090

CUSTOMER:

PREPARATION DATE.....: SEPTEMBER 1993

DATE SENT TO CUSTOMER.....:

INFORMATION PHONE NO.....: 708-537-9400

CHEMTREC.....: 1-800-424-9300

HAZARD RATINGS

HEALTH.....: 2 FLAMMABILITY.....: 0
 REACTIVITY.....: 1 SPECIAL HAZARD.....: 0

SECTION II PRODUCT IDENTITY

TRADE NAME & SYN.....: **MIRASAN PLUS**
 DOT SHIPPING NAME.....: Hydrochloric Acid Solution,
 8 UN 1789 PG II
 DOT HAZARD CLASS.....: Corrosive

SECTION III HAZARDOUS INGREDIENTS

AS ESTABLISHED BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
 AND/OR STANDARDS PROMULGATED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:

COMPONENT	OSHA PEL	ACGIH TLV	APPROX %:
HYDROCHLORIC ACID (CAS# 7647-01-0)	N/A	5 ppm	8.0

SUPPLIER NOTIFICATION

This is to notify you that our product

MIRASAN PLUS

contains the following specific component(s) contained in Table III from Section 313 of the
 Emergency Planning and Community Right-To-Know Act (Title III of the Superfund
 Amendments and Reauthorization Act of 1986.)

INGREDIENT	CAS NUMBER	% IN PRODUCT
HYDROCHLORIC ACID	7647-01-0	8.0

SECTION IIIA NON-HAZARDOUS INGREDIENTS

THESE INGREDIENTS ARE NOT CONSIDERED HAZARDOUS ACCORDING TO THE
 FEDERAL HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

COMPONENT

BALANCE OF COMPONENTS ARE NOT CONSIDERED HAZARDOUS

SECTION IV PHYSICAL DATA

BOILING POINT °F.....: >212 °F EVAPORATION RATE (Butyl Acetate=1) ...: >1
 SPECIFIC GRAVITY @ 25° C.....: 1.051 APPEARANCE @ 25° C.....: Opaque Green
 VAPOR PRESSURE, mm Hg @ 25° C....: UNK Liquid
 VAPOR DENSITY, (AIR=1).....: >1 ODOR.....: Mint Odor
 SOLUBILITY IN WATER.....: Complete

SECTION V FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used).....: None AUTO IGNITION TEMPERATURE LEL ...: N/A
 FLAMMABLE LIMITS: N/A AUTO IGNITION TEMPERATURE UEL...: N/A
 EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical or Foam
 SPECIAL FIRE FIGHTING PROCEDURES: Self-Contained breathing apparatus, full face-piece operated in pressure demand or other positive mode.
 UNUSUAL FIRE & EXPL HAZARDS: Can release hydrogen gas which can form explosive mixtures with air. Can emit toxic and corrosive fumes when heated to decomposition.

SECTION VI REACTIVITY DATA

STABILITY: Stable
 CONDITIONS TO AVOID: Do not heat above 120°F. Do not mix with alkaline materials.
 INCOMPATIBILITY (Materials To Avoid): Strong Alkalies-Oxidizing Agents
 HAZARDOUS DECOMPOSITION PRODUCTS.: Hydrogen Chloride Gas
 HAZARDOUS POLYMERIZATION: Will Not Occur

SECTION VII HEALTH HAZARD DATA

CARCINOGENICITY.....: N/A
 PRIMARY ROUTES OF ENTRY: Eyes, Skin, Inhalation
 HEALTH HAZARDS: Corrosive. Causes severe burns and damage to eyes and skin. Can cause damage to nasal passages and mucuous membranes.
 SIGNS & SYMPTOMS OF EXPOSURE: Redness and irritation of skin. Conjunctivitis and corneal necrosis of eyes. Palpitation and rhinitis if swallowed.
 EMERGENCY FIRST AID PROCEDURES: Give large volumes of water if ingested. Flush skin and eyes with large volumes of water for 15 minutes. Remove contaminated clothing. Administer oxygen if overcome by fumes. Call a physician.

SECTION VIII SPILL, LEAK AND DISPOSAL PROCEDURES

ACTION TO TAKE FOR SPILLS: Cover contaminated surface with sodium bicarbonate or a soda ash/slaked lime mixture to form a slurry. Collect material for disposal when neutralized. Wash with water or discard sludge.
 DISPOSAL METHOD: Follow federal, state and local regulations.

SECTION IX SPECIAL HANDLING INFORMATION

RESPIRATORY PROTECTION: Not Normally Required.

VENTILATION:

LOCAL EXHAUST: Adequate
 MECHANICAL (General): Adequate
 SPECIAL.....: N/A
 OTHER: N/A

PROTECTIVE GLOVES: Rubber
 EYE PROTECTION: Goggles or Face Shield
 PROTECTIVE CLOTHING: Protective Clothing and Shoes

PRECAUTION TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry area. Do not mix with other chemicals. Store in original container.

OTHER PRECAUTIONS: Read and follow label directions.

WORK / HYGIENIC PRACTICES: Avoid contact with skin and eyes.

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