



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 Liquid
VAPOR PRESSURE, mm Hg @ 25° C ...: UNK	ODOR: Mint Odor
VAPOR DENSITY, (AIR=1): >1	
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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