

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY/TRADE NAME: HARDENER K

MANUFACTURER: KIWO, INC.

ADDRESS: 1929 MARVIN CIRCLE, P.O. BOX 1009, SEABROOK, TX 77586

INFORMATION TELEPHONE NUMBER: 281-474-9777

HAZARDOUS DATA SECTION

HAZARDOUS INGREDIENTS	% RANGE	CAS NUMBER
TRADE SECRET	2-22%	NA
HYDROCHLORIC ACID (33%)	2-22%	7647-01-0
WATER	78-98%	----
WETTING AGENTS & DYE	<1%	NOT AVAILABLE

BOILING POINT: 212 F (100 C) VAPOR PRESSURE: UNKNOWN mm Hg

SOLUBILITY: COMPLETE IN WATER pH- <1 (CALCULATED) SPECIFIC GRAVITY: 1.03

APPEARANCE AND ODOR: RED LIQUID, LIGHT PUNGENT ODOR

PHYSICAL HAZARD DATA

COMPRESSED GAS: NO PYROPHORIC: NO

OXIDIZER: NO ORGANIC PEROXIDE: NO

FLAMMABLE/COMBUSTIBLE: NO FLASH POINT: N/A

EXTINGUISHING MEDIA: THIS MATERIAL IS NOT COMBUSTIBLE. USE MEDIA APPROPRIATE FOR FIRE TYPE, HOWEVER USE CARE WHEN APPLYING WATER TO STRONG ACID.

SPECIAL FIRE FIGHTING PROCEDURES: NONE REQUIRED

EXPLOSIVE: NO LEL: N/A UEL: N/A

REACTIVITY/INCOMPATIBILITY: STRONG ALKALIS, METALS, AMINES, CYANIDES, SULFIDES, SULFITES.

HAZARDOUS DECOMPOSITION: LIBERATES HCL GAS WHEN HEATED, REACTION WITH METALS WILL LIBERATE FLAMMABLE HYDROGEN GAS.

SPECIAL STORAGE PRECAUTIONS: KEEP IN ORIGINAL CONTAINER. STORE IN A DRY PLACE AND KEEP AIRTIGHT. DO NOT STORE WITH INCOMPATIBLE MATERIALS.

HEALTH HAZARD DATA

ACUTE EFFECTS OF OVEREXPOSURE: CAUSES STRONG IRRITATION AND BURNS ON SKIN AND MUCOUS MEMBRANES. EYE CONTACT CAN CAUSE BURNS AND CORNEAL DAMAGE. INHALATION OF MIST CAN CAUSE RESPIRATORY IRRITATION, COUGHING, BURNING OF THROAT; IF INHALED DEEPLY, PULMONARY EDEMA.

CHRONIC EFFECTS OF OVEREXPOSURE: LOW LEVEL EXPOSURE CAN CAUSE TEETH EROSION. PROLONGED/REPEATED SKIN CONTACT WITH DILUTE SOLUTIONS CAN CAUSE DERMATITIS.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: DERMATITIS

PRIMARY ROUTE(S) OF EXPOSURE: SKIN, EYE, RESPIRATORY TRACT. INGESTION

LISTED CARCINOGEN: NO

EXPOSURE LIMITS:	HYDROGEN CHLORIDE
OSHA PEL:	5 PPM CEILING
ACGIH TLV:	5 PPM CEILING

FIRST AID: EYE-FLUSH WITH WATER 30 MINUTES THEN SEEK MEDICAL ATTENTION IMMEDIATELY. SKIN-REMOVE CONTAMINATED CLOTHING WHILE WASHING UNDER SAFETY SHOWER, WASH AREAS THOROUGHLY, SEEK MEDICAL ATTENTION. INHALATION-REMOVE TO FRESH AIR, SEEK MEDICAL ATTENTION IF SYMPTOMS PERSIST. INGESTION-DO NOT INDUCE VOMITING-GIVE WATER TO DILUTE AND SEEK IMMEDIATE MEDICAL ATTENTION.

SAFE HANDLING PROCEDURES

HYGIENIC PRACTICES: USE RECOMMENDED PROTECTIVE EQUIPMENT, AVOID CONTACT.

SPECIAL PROTECTIVE MEASURES DURING REPAIR/MAINTENANCE OF CONTAMINATED EQUIPMENT: USE RECOMMENDED PROTECTIVE EQUIPMENT, AVOID CONTACT.

SPILL HANDLING/CLEAN-UP: WEAR APPROPRIATE PROTECTIVE EQUIPMENT, CONTAIN, NEUTRALIZE WITH SODA ASH, THEN FLUSH TO SEWER WITH WATER.

CONTROL MEASURES

RECOMMENDED ENGINEERING CONTROLS: NONE REQUIRED FOR NORMAL USE. EYE WASH & SAFETY SHOWER SHOULD BE LOCATED NEAR AREA OF USE.

RECOMMENDED WORK PRACTICES: AVOID CREATING MIST OR SPLATTERING MATERIAL. USE PROTECTIVE CLOTHING AND AVOID CONTACT WITH MATERIAL.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT: RESPIRATORY PROTECTION: NONE USUALLY REQUIRED. A RESPIRATOR APPROVED FOR ACID GASES MAY BE USED IF NEEDED. SELECTION AND USE DEPENDS ON CONCENTRATION OF CONTAMINANT. CONTACT AN INDUSTRIAL HYGIENIST FOR ASSISTANCE.

GLOVES: RUBBER GLOVES OR OTHER RECOMMENDED FOR USE WITH STRONG ACIDS.

EYE PROTECTION: CHEMICAL SPLASH GOGGLES AND/OR FACE SHIELD MUST BE USED.

OTHER: CHEMICAL PROTECTIVE APRON OR OTHER CLOTHING MAY BE USED AS NEEDED.

REGULATORY STATUS

TSCA - ALL INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY

THE FOLLOWING CHEMICAL INGREDIENTS ARE REGULATED UNDER PROPOSITION 65 OF THE STATE OF CALIFORNIA

NONE

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS 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 (SARA 313 - TOXIC CHEMICAL RELEASE REPORTING.)

HYDROCHLORIC ACID	7647-01-0	<2%
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COMMENTS: FOR INDUSTRIAL/COMMERCIAL USE ONLY

DATE PREPARED/UPDATED: FEBRUARY 13, 2003
PREPARED BY: CLARK KING, EXEC. V.P., KIWO, INC.