((

MATERIAL SAFETY DATA SHEET

REPIRATORY PROTECTION

NIOSH-APPROVED RESPIRATOR TO CONTROL TLV.

VENTILATION

LOCAL EXHAUST IS ACCEPTABLE BUT, MECHANICAL EXHAUST IS RECOMMENDED.

PROTECTIVE GLOVES

LATEX RUBBER.

EYE PROTECTION

SAFETY GLASSES/GOGGLES.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

SAFETY SHOWER/ EYEWASH.

WORK/HYGIENIC PRACTICES

DO NOT EAT, DRINK OR SMOKE AROUND PRODUCT.

THIS INFORMATION IS TO THE BEST OF OUR KNOWLEDGE AND BELIEF ACCURATE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION OR UARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS.

MATERIAL SAFETY DATA SHEET

METAL ETCH

Page:

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

MAY LIBERATE HYDROGEN GAS OR PHOSPHOROUS OXIDES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

IRRITATION TO RESPIRATORY TRACT.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY CAUSE BURNS TO SKIN AND/OR EYES.

SKIN ABSORPRTION HEALTH RISKS AND SYMPTONS OF EXPOSURE

BURNING, DRYNESS, DERMATITIS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

BURNING OF MUCOUS MEMBRANES.

HEALTH HAZARDS (ACUTE AND CHRONIC)

IRRITATION TO RESPIRATORY TRACT. BURNS TO SKIN AND/OR MUCOUS MEMBRANES.

CARCINOGENICITY: NTP CARCINOGEN: NO IARC MONOGRAPHS: NO OSHA REGULATED: NO

THIS PRODUCT IS NOT LISTED IN THE NTP, IARC OR OSHA LISTS FOR CARCINOGENICITY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

SKIN CONDITIONS MAY BE AGGRAVATED.

EMERGENCY AND FIRST AID PROCEDURES

SKIN: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. INHALATION: REMOVE VICTIM TO FRESH AIR. RESTORE BREATHING IF NECESSARY. REMEMBER TO NEVER GIVE ANYTHING TO AN UNCONCIOUS PERSON. INGESTION: DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

======= SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====================

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

CONTAIN AND NEUTRALIZE WITH SODA ASH. KEEP OUT OF SEWERS AND WATER SOURCES. ABSORB WITH INERT MATERIAL.

WASTE DISPOSAL METHOD

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

KEEP IN A VENTILATED AREA. STORE IN AN UPRIGHT POSITION. STORE AT TEMPERATURES FROM 70-80 DEG. F.

OTHER PRECAUTIONS

MATERIAL IS CORROSIVE. OBSERVE ALL PRECAUTIONS EVEN WHEN CONTAINER IS EMPTY.

MATERIAL SAFETY DATA SHEET

METAL ETCH

Page: 1

HMIS CODES: HFRP

2 * 1 0 C

RODUCT NAME: METAL ETCH PROCUCT CODE: 0700-0703

MANUFACTURER'S NAME:

JASCO Chemical Corp.

ADDRESS

1008 N. Fuller St.

Santa Ana, CA. 92701

EMERGENCY PHONE

800-424-9300

DATE PRINTED

: 6/01

INFORMATION PHONE

(714) 547-6951

NAME OF PREPARER

: RE

REPORTABLE COMPONENTS	cas number	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
PHOSPHORIC ACID 75%; ORTHOPHOSPHORIC ACID OSHA PEL: 1 MG/M3, ACGIH TLV: 1 MG/M3, OTHER: N/A	7664 38 2	15 104	40
ETHYLENE GLYCOL BUTYL ETHER OSHA PEL: 50 PPM, ACGIH TLV: 25 PPM, OTHER: N/A	111-76-2	.9 77	5

^{***} No toxic chemical (s) subject to the reporting requirements of section 313 of Title III of 40 CFR 372 are present. *** WARNING: THIS PRODUCT CONTAINS TRACE AMOUNTS OF ETHYLENE OXIDE WHICH IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR REPRODUCTIVE TOXICITY.

========= SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====================

BOILING RANGE:

206 DEG. F

SPECIFIC GRAVITY (H2O=1):

1.17

VAPOR DENSITY: HEAVIER THAN AIR

EVAPORATION RATE:

SLOWER THAN ETHER

COATING V.O.C.:

189.6 g/L

SOLUBILITY IN WATER:

COMPLETE

APPEARANCE AND ODOR: VISCOUS, WATER-WHITE LIQUID; ACIDIC ODOR.

FLASH POINT: NONE

METHOD USED: N/A

FLAMMABLE LIMITS IN AIR BY VOLUME-LOWER: 1.1

UPPER: 10.6

EXTINGUISHING MEDIA: CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

USE WATER SPRAY TO COOL CONTAINERS. FIREFIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING WHEN FIGHTING FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS

HYDROGEN GAS MAY BE LIBERATED BY CONTACT WITH SOME MATERIAL

STABILITY: STABLE CONDITIONS TO AVOID

NE KNOWN.

INCOMPATIBILITY (MATERIALS TO AVOID)

ALKALIS, OXIDIZING OR REDUCING AGENTS.