SECTION I

CATALOGUE NUMBER(S): 070-814-000
PRODUCT NAME: PRINT-PRINT PLATE ETCHING SOLUTION
MANUFACTURER: FR Chemicals 524 South Columbus Avenue Mt. Vernon, New York 10550
PRODUCT INFORMATION: (814)-687-1002
MSDS REVISED AS OF: 05/01/91
EXPOSURE OR ACCIDENT EMERGENCY (24 HOUR): CHEMTREC (800) 424-9300

** THIS PRODUCT CONTAINS TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 AND OF 40 CFR 372. SEE SECTION II.

SECTION II: COMPONENT AND REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>COMPONENTS &amp; (REGULATORY LISTS)</th>
<th>CAS REG. NO.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>% WT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>N/A</td>
<td>N/A</td>
<td>40-70</td>
</tr>
<tr>
<td>N-Propyl Alcohol</td>
<td>71-23-8</td>
<td>(TWA) 500 ppm</td>
<td>(TWA) 500 ppm</td>
<td>7-13</td>
</tr>
<tr>
<td>** Ethylene Glycol (C)</td>
<td>107-21-1</td>
<td>N/A</td>
<td>(TWA) 50 ppm</td>
<td>10-30</td>
</tr>
</tbody>
</table>

* CEILING VALUE (TWA) - TIME WEIGHTED AVERAGE N/A - NOT APPLICABLE

REGULATORY LISTS FOR APPLICABLE COMPONENTS
A - CERCLA HAZARDOUS SUBSTANCE LIST
B - SARA TITLE III EXTREMELY HAZARDOUS SUBSTANCE LIST (SECTION 302)
C - SARA TITLE III TOXIC CHEMICAL LIST (SECTION 313)
D - CALIFORNIA (PROP. 65) LIST OF CANCER CAUSING SUBSTANCES
E - RESOURCE CONSERVATION AND RECOVERY ACT HAZARDOUS WASTE LIST

SECTION III: PHYSICAL DATA

pH: 5.3  SPECIFIC GRAVITY: 1.03  SOLUBILITY IN WATER: Completely soluble.
BOILING POINT: Not Available  EVAPORATION RATE: Not Available
VAPOR PRESSURE: Not Available  VAPOR DENSITY: Not Available
% VOLATILITY (as Water) 60-100
APPEARANCE AND ODOR: Clear, slightly cloudy solution, alcohol odor.

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): 104 F (Closed Cup Method)
FLAMMABLE LIMITS - LEL: ?  UEL: ?
EXTINGUISHING MEDIA: Any applicable to the primary cause of fire.
SPECIAL FIREFIGHTING PROCEDURES: Evacuate personnel to a safe area. Firefighters should wear self-contained breathing apparatus.
UNUSUAL FIRE HAZARDS: Product susceptible to flash at elevated temperatures.

SECTION V: REACTIVITY

STABILITY: Stable  CONDITIONS TO AVOID: None
INCOMPATIBILITY (AVOID): None
HAZARDOUS DECOMPOSITION PRODUCTS: None
POLYMERIZATION: Does not polymerize  CONDITIONS TO AVOID: None

SECTION VI: SPILL AND DISPOSAL INFORMATION

SPILLS
Use appropriate protective equipment. Dike the spill and soak up with absorbant material. Prevent liquid from entering sewers or waterways.

WASTE DISPOSAL
Discharge to sewer requires the approval of permitting authority and may require pretreatment. Incineration requires a permitted incinerator. Landfill disposal requires a permitted landfill. Treatment, storage, transportation, and disposal must be in accordance with Federal, State, and Local Regulations.
SECTION VII: HEALTH HAZARD AND FIRST AID INFORMATION

EXPOSURE EFFECTS:
EYE CONTACT: Eye discomfort with possible transient conjunctivitis. Serious corneal injury not anticipated. Minor irritation also possible.
SKIN CONTACT: No adverse effects from available information either through contact or absorption.

INGESTION: Abdominal discomfort or pain, dizziness, nausea, vomiting, decreased reaction, euphoria, lumbar pain, oliguria, central nervous system depression, and coma possible.
INHALATION: Mist may irritate the nose and throat. High vapor concentrations caused by heating in a poorly ventilated area may produce nausea, vomiting, headache, and dizziness.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No medical conditions known to be aggravated by exposure to this product.
CARCINOGENICITY: None of the chemicals used in this product are listed on NTP, IARC, or OSHA listings of carcinogens.

FIRST AID:
EYE: Flush the eyes thoroughly with water. Obtain medical attention.
SKIN: Remove contaminated clothing and flush the exposed area with water.
INGESTION: If conscious, give 2 glasses of water. Do not induce vomiting. Obtain prompt medical attention.
INHALATION: Remove to fresh air. If discomfort persists contact a physician.

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use a NIOSH approved cartridge respirator in poorly ventilated areas.
VENTILATION RECOMMENDED: 10 room volumes per hour is adequate ventilation under normal conditions.
PROTECTIVE EQUIPMENT RECOMMENDED: Chemical splash goggles, latex or neoprene gloves, lab coat, and eye wash station.

SECTION IX: SPECIAL PRECAUTIONS

STORAGE AND HANDLING PRECAUTIONS: Store in a well ventilated area. Keep container tightly capped when not in use. Do not store food, drink, or tobacco in areas where contamination could occur with this product. OTHER PRECAUTIONS: Avoid breathing vapors or mists. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not take internally. Keep out of reach of children.

SECTION X: NFPA RATING

HEALTH - 1   FLAMMABILITY - 1   REACTIVITY - 0

SECTION XI: DOT INFORMATION

DOT SHIPPING NAME: Alcohol N.O.S.
HAZARD CLASS: Combustible Liquid
ID #: UN 1987