LITHO WASH

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

Product Name: LITHO WASH

SEP 0 5 1996

Data Sheet No: 0266875-001.001
Prepared: 07/14/92
Supersedes: ( N/A )
Updated: 12/20/93

SECTION I - PRODUCT IDENTIFICATION

General or Generic ID: SOLVENT BLEND
DOT Hazard Classification: COMBUSTIBLE (173,115)

SECTION II - COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>Percent</th>
<th>PEL</th>
<th>TLV</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>AROMATIC PETROLEUM DISTILLATES CAS #: 64742-95-6</td>
<td>18</td>
<td>100 PPM</td>
<td>( 1 )</td>
<td></td>
</tr>
<tr>
<td>ALIPHATIC HYDROCARBONS (STOODARD TYPE) CAS #: 8052-41-3</td>
<td>78-82</td>
<td>100 PPM</td>
<td>100 PPM</td>
<td>( 2 )</td>
</tr>
<tr>
<td>NONYLPHENOL + 9 EO POLYOXOXYLATE CAS #: 8016-48-9</td>
<td>1-3</td>
<td></td>
<td></td>
<td>( 3 )</td>
</tr>
</tbody>
</table>

Notes:

( 1 ) TLV NOT ESTABLISHED FOR THIS MATERIAL.

THIS ITEM CONTAINS APPROXIMATELY 7% XYLENE (CAS # 1330-20-7) WHICH HAS A PEL AND TLV OF 100 PPM AND AN STEL OF 150 PPM; APPROXIMATELY 3% CUMENE (CAS # 98-82-8) WHICH HAS A PEL AND TLV OF 50 PPM-SKIN; APPROXIMATELY 40% TRIMETHYLBENZENE (CAS # 2555-13-7), WHICH HAS A PEL AND A TLV OF 25 PPM. TRIMETHYLBENZENE MAY CONTAIN 0.5% PSEUDOCUMENE 1,2,4- OR 1,2,5-TRIMETHYLBENZENE (CAS # 95-62-6, AND 22.5% Mesitylene 1,3,5-TRIMETHYLBENZENE (CAS # 108-67-8) THE PEL LISTED FOR THIS ITEM IS FOR COAL TAR NAPHTHA, BASED ON THE AGCH DOCUMENTATION FOR COAL TAR NAPHTHA (SINCE DELETED). XYLENE, CUMENE AND 1,2,4-TRIMETHYLBENZENE ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III.
( 2 ) NIOSH RECOMMENDS A LIMIT OF 350 MG/CUM - 8 HOUR TIME WEIGHTED AVERAGE, 1800 MG/CUM AS DETERMINED BY A 15 MINUTE SAMPLE.
( 3 ) PEL/TLV NOT ESTABLISHED FOR THIS MATERIAL.

TRACTS OF ETHYLENE OXIDE MAY ACCUMULATE IN THE HEAD SPACE OF STORAGE AND TRANSPORT VESSELS. THE TLV OF ETHYLENE OXIDE IS 1 PPM. REFER TO 29 CFR 1910.1047 FOR CURRENT OSHA REGULATIONS.

SECTION III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point for COMPONENT( 78-82%)</td>
<td>300.00 Deg F (148.88 Deg C) @ 760.00 mm Hg</td>
</tr>
<tr>
<td>Vapor Pressure for COMPONENT( 78-82%)</td>
<td>12.00 mm Hg @ 100.00 Deg C (37.77 Deg C)</td>
</tr>
<tr>
<td>Specific Vapor Density</td>
<td>AIR = 1 &gt; 1.0</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>793</td>
</tr>
<tr>
<td>Percent Volatiles</td>
<td>6.62 VOC lbs. per gallon &gt;99%</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>SLOWER THAN ETHER</td>
</tr>
</tbody>
</table>

SECTION IV - FIRE AND EXPLOSION INFORMATION

FLASH POINT(TCC ) 100.0 - 110.0 Deg F (37.8 - 43.3 Deg C)
EXPLOSIVE LIMIT (LOWEST VALUE OF COMPONENT) LOWER - 1.0%
EXTINGUISHING MEDIA: REGULAR FOAM OR CARBON DIOXIDE OR DRY CHEMICAL
HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS: CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH OR NEAR DRUM (EVEN EMPTY) BECAUSE

CONTINUED ON PAGE: 2
SECTION IV - FIRE AND EXPLOSION INFORMATION (Continued)

PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

ALL FIVE GALLON PAILs AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGIITED BY HEAT, PILOr LIGHTS, OTHER FLAMES AND IGIITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

SECTION V - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

EFFECTS OF ACUTE OVEREXPOSURE:

EYES - EXPOSURE TO LIQUID OR VAPORS MAY CAUSE SEVERE EYE IRRITATION. SYMPTOMS MAY INCLUDE BURNING, TEARING, REDNESS, SWELLING, AND EYE DAMAGE.

SKIN - EXPOSURE MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED EXPOSURE MAY DRY THE SKIN. SYMPTOMS MAY INCLUDE REDNESS, BURNING, DRYING AND CRACKING, SKIN BURNS AND SKIN DAMAGE.

BREATHEING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION. CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE AND POSSIBLE UNCONSCIOUSNESS, AND EVEN DEATH.

SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION. NAUSEA, VOMITING, AND DIARRHEA. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

FIRST AID:

IF ON SKIN: REMOVE CONTAMINATED CLOTHING. FLUSH EXPOSED AREA WITH LARGE AMOUNTS OF WATER. IF SKIN IS DAMAGED, APPLY A CLEAN DRESSING AND SEEK IMMEDIATE MEDICAL ATTENTION. IF SKIN IS NOT WASHED, EXPOSED AREA WITH LARGE AMOUNTS OF WATER. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

IF IN EYES: IF SYMPTOMS DEVELOP, IMMEDIATELY MOVE INDIVIDUAL AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES FOR AT LEAST 20 MINUTES WHILE HOLDING EYELIDS APART AND SEEK IMMEDIATE MEDICAL ATTENTION.

IF SWALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHTTING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH: STRONG OXIDIZING AGENTS

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON VERMICULITE, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL.

LARGE SPILL: ELIMINATE ALL IGIITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE. PREVENT FROM ENTERING DRAINS, SEWERS, STREAMS OR OTHER BODIES OF WATER PREVENT FROM SPREADING. IF RUNOFF OCCURS, NOTIFY AUTHORITIES AS REQUIRED. PUMP OR VACUUM SPILLED PRODUCT TO CLEAN CONTAINERS FOR RECOVERY. ABSORB UNRECOVERABLE PRODUCT. TRANSFER CONTAMINATED ABSORBENT, SOIL AND OTHER MATERIALS TO CONTAINERS FOR DISPOSAL.

PREVENT RUN-OFF TO SEWERS, STREAMS OR OTHER BODIES OF WATER. IF RUN-OFF OCCURS, NOTIFY PROPER AUTHORITIES AS REQUIRED, THAT A SPILL HAS OCCURRED.

WASTE DISPOSAL METHOD:

SMALL SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

LARGE SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OTHER RESPIRATORY PROTECTIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER).

PROTECTIVE APPAREL: WEAR CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED. HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

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CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMTPTIED. SINCE EMTPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED.

WARNING!!! SUDDEN RELEASE OF HOT ORGANIC CHEMICAL VAPORS OR MISTS FROM PROCESS EQUIPMENT OPERATING AT ELEVATED TEMPERATURE AND PRESSURE, OR SUDDEN INGESTION OF AIR INTO VACUUM EQUIPMENT, MAY RESULT IN IGNITIONS WITHOUT THE PRESENCE OF OBVIOUS IGNITION SOURCES. PUBLISHED "AUTOIGNITION" OR "IGNITION" TEMPERATURE VALUES CANNOT BE TREATED AS SAFE OPERATING TEMPERATURES IN CHEMICAL PROCESSES WITHOUT ANALYSIS OF THE ACTUAL PROCESS CONDITIONS. ANY USE OF THIS PRODUCT IN ELEVATED TEMPERATURE PROCESSES SHOULD BE THOROUGHLY EVALUATED TO ESTABLISH AND MAINTAIN SAFE OPERATING CONDITIONS.

HYDROCARBON SOLVENTS ARE BASICALLY NON-CONDUCTORS OF ELECTRICITY AND CAN BECOME ELECTROSTATICALLY CHARGED DURING MIXING, FILTERING OR PUMPING AT HIGH FLOW RATES. IF THIS CHARGE REACHES A SUFFICIENTLY HIGH LEVEL, SPARKS CAN FORM THAT MAY IGNITE THE VAPORS OF FLAMMABLE LIQUIDS.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.
MATERIAL SAFETY DATA SHEET

DEFINITIONS
This definition page is intended for use with Material Safety Data Sheets supplied by the Ashland Chemical Company. Recipients of these data sheets should consult the OSHA Safety and Health Standards (29 CFR 1910), particularly subpart G - Occupational Health and Environmental Control, and subpart I - Personal Protective Equipment, for general guidance on control of potential Occupational Health and Safety Hazards.

SECTION I
PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: Chemical family or product description.

DOT HAZARD CLASSIFICATION: Product meets DOT criteria for hazards listed.

SECTION II
COMPONENTS

Components are listed in this section if they present a physical or health hazard and are present at or above 1% in the mixture. If a component is identified as a CARCINOGEN by NTP, IARC, or OSHA as of the date on the MSDS, it will be listed and footnoted in this section when present at or above 0.1% in the product. Negative conclusions concerning carcinogenicity are not reported. Additional health information may be found in Section V. Components subject to the reporting requirements of Section 313 of SARA Title III are identified in the footnotes in this section, along with typical percentages. Other components may be listed if deemed appropriate.

Exposure recommendations for components, OSHAmissible Exposure Limits (PELs) and American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) appear on the line with the component identification. Other recommendations appear as footnotes.

SECTION III
PHYSICAL DATA

BOILING POINT: Of product if known. The lowest value of the components is listed for mixtures.

VAPOR PRESSURE: Of product if known. The highest value of the components is listed for mixtures.

SPECIFIC VAPOR DENSITY: Compared to AIR = 1. If the Specific Vapor Density of a product is not known, the value is expressed as lighter or greater than air.

SPECIFIC GRAVITY: Compared to WATER = 1. If Specific Gravity of product is not known, the value is expressed as less than or greater than water.

pH: If applicable.

PERCENT VOLATILES: Percentage of material with initial boiling point below 425 degrees Fahrenheit and vapor pressure above 0.1mm Hg at 68 F.

EVAPORATION RATE: Indicated as faster or slower than ETHYL ETHER, unless otherwise stated.

SECTION IV
FIRE AND EXPLOSION DATA

FLASH POINT: Method identified.

EXPLOSION LIMITS: For product if known. The lowest value of the components is listed for mixtures.

ARDOUS DECOMPOSITION PRODUCTS: Known or suspected hazardous products resulting from heating, burning or other reactions.

SECTION IV (cont.)
EXTINGUISHING MEDIA: Following National Fire Protection Association criteria.

FIREFIGHTING PROCEDURES: Minimum equipment to protect firefighters from toxic products of vaporization, combustion or decomposition in fire situations. Other firefighting hazards may also be indicated.

SPECIAL FIRE AND EXPLOSION HAZARDS: States hazards not covered by other sections.

NFPA CODES: Hazard ratings assigned by the National Fire Protection Association.

SECTION V
HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LIMIT: For product.

THRESHOLD LIMIT VALUE: For product.

EFFECTS OF ACUTE OVEREXPOSURE: Potential local and systemic effects due to single or short term overexposure to the eyes and skin or through inhalation or ingestion.

EFFECTS OF CHRONIC OVEREXPOSURE: Potential local and systemic effects due to repeated or long term overexposure to the eyes and skin or through inhalation or ingestion.

FIRST AID: Procedures to be followed when dealing with accidental overexposure.

PRIMARY ROUTE OF ENTRY: Based on properties and expected use.

SECTION VI
REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Conditions to avoid to prevent hazardous polymerization resulting in a large release of energy.

STABILITY: Conditions to avoid to prevent hazardous or violent decomposition.

INCOMPATIBILITY: Materials and conditions to avoid to prevent hazardous reactions.

SECTION VII
SPILL OR LEAK PROCEDURES

Reasonable precautions to be taken and methods of containment, clean-up and disposal. Consult federal, state and local regulations for accepted procedures and any reporting or notification requirements.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

Protective equipment which may be needed when handling the product.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

Covers any relevant points not previously mentioned.

ADDITIONAL COMMENTS

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. "EMPTY" drums should not be given to individuals. Serious accidents have resulted from the misuse of "EMPTY" containers (drums,pails,etc.). Refer to Sections IV and IX.