#490 BLACK INK
PAGE 1 of 1
09/11/03 REV. 2

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers and users of this product.

PRODUCT DESCRIPTION: #490 INK – Black
PREPARATION DATE: 09/11/03 REV. 2

SECTION I - GENERAL INFORMATION

TRADE NAME: PANNIER
GENERIC NAME: Flexographic Ink
CHEMICAL FAMILY: Mixture
CAS NO.: NOT AVAILABLE (MIXTURE)
DOT HAZARDOUS MATERIALS PROPER SHIPPING NAME: Ink
DOT HAZARD CLASS: Flammable Liquid
UN/NA ID NO.: UN 1210
HMIS CODES: 3H, 2F, 0R

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS | CAS NUMBER | OSHA PEL | ACGIH TLV | MM | HG | @ | TEMP | PERCENT
--- | --- | --- | --- | --- | --- | --- | --- | ---
Cyclohexanone Solvent | 108-94-1 | 50 PPM | 25 PPM | 3.4 | 68° F | 7-12
Isophorone | 78-59-1 | 25 PPM | 5 PPM | 1.0 | 68° F | 55-70
3,5,5-Triethyl-3-Cyclohexen-1-one | 471-01-2 | n/a | n/a | | | < 2

SECTION III - PHYSICAL DATA

BOILING RANGE: 312 to 419°F
SPECIFIC GRAVITY (H₂O=1): 1.0
VAPOR DENSITY: Heavier than Air
EVAPORATION RATE: Slower than Ether
MATERIAL V.O.C.: 5.8 to 6.5 LB/GL (695 to 778 G/L)
SOLUBILITY IN WATER: Slight
APPEARANCE AND ODOR: Viscous Liquid Material with Strong Odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 111°F
METHOD USED: PMCC
FLAMMABLE LIMITS IN AIR BY VOLUME: LOWER: 0.8% UPPER: 9.4%
EXTINGUISHING MEDIA: Foam, CO₂, Dry Chemical
SPECIAL FIREFIGHTING PROCEDURES: Use water fog to cool containers. Use self-contained breathing apparatus where appropriate to fight fire. Wear protective clothing. Fight fire from a safe distance.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode if exposed to extreme heat.

SECTION V - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Extreme heat, open flame or sparks.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, strong acids.
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Acrid smoke, oxides of carbon and/or nitrogen may be released as byproducts of combustion.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: May cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain, coughing, headache, nausea, vomiting, dizziness, drowsiness, disturbed vision and unconsciousness. High concentrations of vapor may cause nausea, vomiting, headache, and dizziness.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: SKIN: Brief contact may cause slight irritation with itching and local redness. Prolonged contact causes mild to moderate local redness and swelling. EYES: Causes severe
irritation, experienced as discomfort or pain, excess blinking and tear production, marked excess redness and swelling of the conjunctiva, and chemical burns of the eye.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Prolonged contact may affect the central nervous system characterized by dizziness, weakness, fatigue, nausea, headache, and possible unconsciousness or death.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: If swallowed, causes drunkenness, followed by severe systemic illness. Moderately toxic. May cause abdominal discomfort, nausea, vomiting, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC): Liquid material in contact with eyes will cause irritation. Upon direct contact skin may become dry/cracked, thus causing irritation. Prolonged contact with material may affect the central nervous system characterized by dizziness, weakness, fatigue, nausea, headache and possible unconsciousness or death. Damaged red blood cells may be produced as a result of prolonged exposure to this material.

CARCINOGENICITY: NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Not known to manufacturer at present.

EMERGENCY AND FIRST AID PROCEDURES: EYES: Flush immediately with water for 15 minutes. SKIN: Wash with soap and water. Remove contaminated clothing immediately. INGESTION: Seek medical attention. Do NOT induce vomiting.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb or contain with sand or an absorbent material and dispose in approved manner. Wear appropriate protective equipment that may include chemical resistant gloves, goggles or face shield, apron, and organic vapor respirator.

WASTE DISPOSAL METHOD: Dispose in accordance with local, state and federal regulations. Material may be compatible with industrial waste incineration or inclusion in a fuel blending program. This characterization is subject to approval by your waste management contractor.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Protect container from freezing. Overheating may cause container to rupture, thus covered storage is preferred. Containers should not be stacked more than two high. 55 gallon containers should be moved with appropriate material handling equipment.

OTHER PRECAUTIONS: Do not store or use near heat, sparks, or flame. Store and use only in well-ventilated areas. Do not re-use, flame-cut or weld empty containers. Do not ingest. Prevent prolonged or repeated breathing of vapor. Avoid skin and/or eye contact.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Typically, clean-up operations using solvent should consider the use of an organic vapor respirator, particularly where ventilation may be inadequate or not available (for example in an area with only window ventilation).

VENTILATION: Provide adequate exhaust ventilation at the point of generation to maintain the employees’ breathing zone air below the exposure limit listed in Section II.

PROTECTIVE GLOVES: Chemical resistant (Butyl) recommended.

EYE PROTECTION: Splashproof safety goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Typically, usual work clothes will suffice; chemical apron, eye bath, safety shower.

WORK/HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

SECTION IX - SPECIAL PRECAUTIONS

NO OTHER DATA AVAILABLE

SECTION X - REGULATORY INFORMATION

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372.

None

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA) REQUIRE Notification of the National Response Center if Release of Quantities of Hazardous Substances Equal to or Greater than the Reportable Quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>CAS NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone</td>
<td>78-59-1</td>
</tr>
</tbody>
</table>

DISCLAIMER OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES THAT WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS. THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.