SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION
PRODUCT NAME: #4 BLACK
PRODUCT USE: Marking Ink
PANNIER P/N: I0004-1110
CHEMICAL FAMILY: Mixture
CAS NO.: NOT AVAILABLE (MIXTURE)
Not recommended for: Consumer Use
Manufacturer/Supplier:
PANNIER CORPORATION
207 SANDUSKY STREET
PITTSBURGH, PA 15212-5823 U.S.A.
24 Hr Emergency Telephone Number: INFOTRAC 1-800-535-5053

SECTION 2 - HAZARDS IDENTIFICATION

Warning: health

Risk statements: irritating to eyes, respiratory system, throat and skin. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. Harmful if swallowed – can cause nausea, vomiting and narcosis.
Safety statements: avoid contact with skin and eyes. Keep container tightly closed. No smoking!
Potential health effects: High concentrations may cause nervous system disturbances and narcosis. Chronic: excessive exposure may cause kidney, liver and possibly blood disturbances.
Emergency and first aid procedures:
Inhalation: remove to fresh air, restore breathing. Treat symptoms. Consult a physician.
Eyes: flush immediately with water for 15 minutes. See a physician.
Skin: wash with soap and water. Remove contaminated clothing. Consult a physician if irritation persists.
Ingestion: drink water to dilute. Do not induce vomiting. Consult a physician or poison control center immediately.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS number</th>
<th>weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>dipropylene glycol methyl ether</td>
<td>345990-94-8</td>
<td>5</td>
</tr>
<tr>
<td>*ethylene &amp; diethylene glycols</td>
<td>107-21-1</td>
<td>69</td>
</tr>
</tbody>
</table>

SECTION 4 - FIRST AID MEASURES
Inhalation: remove to fresh air, restore breathing. Treat symptoms, consult a physician.
Eyes: flush immediately with water for 15 minutes. See a physician.
Skin: wash with soap and water, remove contaminated clothing. Consult a physician if irritation persists.
Ingestion: drink water to dilute. Do not induce vomiting. Consult a physician or poison control center immediately.

SECTION 5 - FIRE FIGHTING MEASURES
Extinguishing media: alcohol foam, co2, dry chemical, water fog
Special firefighting procedures: water may be used to cool closed containers to prevent explosion when exposed to extreme heat. Full protective equipment may be needed to protect firefighters from hazardous combustion products. Unusual fire and explosion hazards: during emergency conditions, overexposure to decomposition products may cause a health hazard.

SECTION 6 - ACCIDENTAL RELEASE MEASURES
Steps to take in case material is released or spilled: remove by suitable inert absorbing material.
SECTION 7 - HANDLING AND STORAGE
Precautions to be taken in handling and storing: avoid excessive inhalation of vapor or mist.
Other precautions: In accordance with good industrial practice, handle with care and avoid unnecessary contact. Use only with adequate ventilation. Wash thoroughly after handling. For industrial use only. HMIS personal protective equipment is dependent upon conditions of use.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipropylene glycol methyl ether</td>
<td>100 ppm</td>
<td>100 ppm</td>
</tr>
<tr>
<td>*ethylene &amp; diethylene glycols</td>
<td>n/a</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

Control measures: sufficient volume and pattern should be provided to keep air contaminant concentrations below current ACGIH TLV limits.

Respiratory protection: none normally required. However, when required, its use must be in compliance with all OSHA health and fit testing requirements, as given in 29CFR 1910.134.

Protective clothing: use of rubber or plastic gloves recommended for prolonged or repeated contact.

Other protective clothing or equipment: use protective cream when skin contact is likely.

Eye protection: safety eye wear should be available to avoid accidental contact.

Work / hygienic practices: wash hands before eating, drinking or smoking. No smoking in work area.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

- Boiling point: 365 to 387 deg. F.
- Specific gravity (H2O = 1): 1.1
- Vapor density: heavier than air
- Evaporation rate: slower than ether
- Material V. O. C.: 7.58 lb/gl (908 g/l)
- Vapor pressure: 0.4 mm hg @ 77 deg. F
- Solubility in water: insoluble
- Appearance and odor: viscous colored liquid practically odorless
- Flash point: 185 deg. F
- Method used: closed cup
- Flammable limits in air by volume - lower: 2.0% upper: 15.0%

SECTION 10 - STABILITY AND REACTIVITY

- Stability: stable
- Conditions to avoid: none
- Incompatibility (materials to avoid): Contact with strong acids, alkalies or oxidizers
- Hazardous decomposition or byproducts: May produce carbon monoxide, carbon dioxide, oxides of nitrogen, and other hazardous decomposition products.
- Hazardous polymerization: will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Individual ingredient hazards
- Ethylene glycol - ingestion: ld 3 oz. - human. Skin absorption: ld50, 22,270 mg/kg - rabbit, inhalation: nda
- Diethylene glycol - ingestion: ld50, 12,600 mg/kg. - rat. Skin absorption: ld50, 11,900 mg/kg - rabbit, inhalation: nda
- Dipropylene glycol monomethyl ether - ingestion: ld50, 5,135 mg/kg - rat. Skin absorption: nda. Inhilation – nda.
- None currently known.

Medical conditions generally aggravated by exposure: Respiratory irritation, dermatitis and nausea.

SECTION 12 - ECOLOGICAL INFORMATION

NDA

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste disposal method: incineration is preferred, in compliance with local, state and federal regulations. Refer to SDS caution information before attempting cleanup.
SECTION 14 - TRANSPORT INFORMATION
DOT proper shipping name: printing ink
Packing group: n/a
DOT hazard class: n/a
DOT UN/NA number: n/a
Hazard subclass: n/a
Emergency response guide - n/a
Product not regulated.

SECTION 15 - REGULATORY INFORMATION
Toxic substances control act: all of the ingredients are listed in the TSCA inventory.
SARA 313: chemicals subject to reporting requirements of secs. 311, 312 & 313 of TITLE III and of 40 CRF 372 are present. - *ethylene & diethylene glycols

SECTION 16 - OTHER INFORMATION
Disclaimer
The information and recommendations contained herein were obtained from sources believed to be generally reliable, but, we make no warranty concerning their accuracy or sufficiency, and we will not be held liable for claims relating to any party’s use of or reliance on information or recommendations contained herein.

HMIS codes: H – 2, F – 2, R – 0, P -

Legend: nda – no data available n/d - not determined n/e – not established