1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION, REVISION NUMBER AND DATE

Product Name: P64 - 290D BLACK INK
Product Code: C/120/*** ***
Revision No: E
Date: 07/01

2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS (nl - not listed in CHIP)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>%</th>
<th>CAS Number</th>
<th>TSCA Listed</th>
<th>EEC No</th>
<th>Hazard Symbol</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lactic Acid Ethyl Ester</td>
<td>65 - 85</td>
<td>687-47-8</td>
<td>✓</td>
<td>211-694-1</td>
<td>St Andrews Cross</td>
<td>R37, 41</td>
</tr>
<tr>
<td>Metal Complex Dye</td>
<td>&lt; 15</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>N</td>
<td>R51/53</td>
</tr>
</tbody>
</table>

R37 = Irritating to the respiratory system; R41 = Risk of serious damage to eyes; R51/53 = Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

The remaining ingredients, do not present a health hazard within the meaning of the EC/ CHIP2 regulations.

3. HAZARDOUS IDENTIFICATION

Classification (CHIP): Irritant
Main Health Hazards: Risk of serious damage to eyes.
Not expected to present any hazards to health under normal conditions of expected use.

4. FIRST AID

Inhalation: Move casualty to fresh air.
Skin Contact: Wash affected area with soap and water
Eye Contact: Rinse immediately with copious amounts of water. If redness or soreness persists, seek medical advice.
Ingestion: DO NOT induce vomiting. Encourage the casualty to drink water. Seek medical advice.
Do not use:

5. FIRE FIGHTING MEASURES

Flammability: Product is not classified as flammable (Flash Point 61°C), but is combustible.
Combustion products: Oxides of Carbon.
Extinguishing media: In the event of a fire use CO2, Foam, Dry Powder, or Vapourising Liquid.
Do not use: Water Jet.
Measures:

6. ACCIDENTAL RELEASE MEASURE

Mop or soak up spillages absorbent material.
Dispose of in accordance with Local Authority Regulations.

7. HANDLING AND STORAGE

Handling: Avoid prolonged skin contact. Wear gloves and safety glasses if splashing is likely.
Fire Prevention: Avoid heat and sources of ignition
Storage: Normal cool warehouse conditions. Keep in closed container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection: Keep work area well ventilated.
Eye and Skin protection: Wear safety glasses and gloves if splashing is likely.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

OCCUPATIONAL EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>Substance listed</th>
<th>Long term (8 Hrs) ppm</th>
<th>Short term (10 min) ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lactic Acid Ethyl Ester</td>
<td>Not assigned by HSE (1) or ACGIH (2)</td>
<td></td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES (n.d.a = No data available)

- Form: Coloured liquid
- pH: n/a
- Boiling Point: ~155°C
- Flashpoint: 61°C
- Flashpoint: 61°C
- Vapour Pressure: 1.65 mm Hg @ 20°C
- Melting Point: ~ -3 °C
- Solubility in Water: Partially soluble in water
- Vapour Density: ~ 4.0 (Air = 1)
- Autoignition Point: ~ 400 °C
- Density: Approx. 1.03
- Explosive Limits: Lower - 1.6%; Upper - 10.6%

10. STABILITY AND REACTIVITY

- Chemical reactivity: None known
- Decomposition products: None
- Materials / conditions to avoid: None

11. TOXICOLOGICAL INFORMATION

- LD₅₀: Acute / oral / rat: > 3000mg/kg

12. ECOLOGICAL INFORMATION

- Lactic Acid Ethyl Ester: Readily biodegradable; Bio-accumulation unlikely, hydrolyses in presence of water, acids, bases
  - EC₅₀/48h/Daphnia = 683mg/l
  - LC₅₀/48h/Fish = 320mg/l
  - EC₅₀/Algae = 2200mg/l
- Metal Complex Dye: LC₅₀/96h/Cyrinus carpio = ~ 2mg/l

13. DISPOSAL CONSIDERATIONS

Consult Local Authority for regulations regarding waste disposal

14. TRANSPORT REGULATIONS

- Proper shipping name: Printing ink flammable
- UN Number: UN1210
- IMDG code: IMDG class: 3.3
- ICAO/IATA class: 3
- Hazard warning sign: Flammable Liquid

15. REGULATORY INFORMATION

- CHIP labelling:
  - Symbol: St. Andrews Cross
  - Hazard: Irritant
  - Contains: Lactic Acid ethyl Ester
  - Risk Phrases: R37, 41
  - Safety Phrases: S23, 24/25
- Other suggested labelling: R37 = Irritating to the respiratory system; R41 = Risk of serious damage to eyes; S23 = Do not breathe vapour; S24/25 = Avoid contact with skin and eyes

16. OTHER INFORMATION

This safety data sheet has been updated to comply with CHIP regulations. The information is based solely on the data provided by the suppliers of the materials used and/or recognised technical sources, not on the mixture itself and is believed to be correct as of this date. No warranty is expressed or implied regarding the accuracy of the data.

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