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

Product Name: P64 - 290D BLACK INK

Product Code : LMSPI03*KK** (C/120/***/***) * = Variable pack type & size codes

Revision No: J Date: 05/07

2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Chemical Name	<u>%</u>	CAS Number	TSCA Listed	EEC No	Hazard Symbol	Risk Phrases
Lactic Acid Ethyl Ester	65 - 85	687-47-8	4	211-694-1	St Andrews Cross	R37, 41
Metal Complex Dve	< 15	_	4	_	N	R51/53

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/ CHIP 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^{0} 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:

Substance listed Long term (8 Hrs) Short term (10 min) in EH40/-- ppm mg/m^3 ppm mg/m^3

Lactic Acid Ethyl Ester Not assigned by HSE (1) or ACGIH (2)

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

Form: Coloured liquid pH: n/a Boiling

Point: ~155°C

Flashpoint : 61°C

Vapour Pressure : 1.65 mm Hg @ 20°C

Vapour Density : ~ 4.0 (Air = 1)

Solubility in Water: Partially soluble in water Density: Approx. 1.03

Autoignition Point : ~ 400 °C 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

 LD_{50} : Acute / oral / rat : > 3000mg/kg

12. ECOLOGICAL INFORMATION

Lactic Acid Ethyl Ester: Readily biodegradable; Bio-accumulation unlikely, hydrolyses in presence of water, acids, bases

 $EC_{50}/48h/Daphnia = 683mg/l$ $LC_{50}/48h/Fish = 320mg/l$ $EC_{50}/Algae = 2200mg/l$

Metal Complex Dye : $LC_{50}/96h/Cyrinus$ carpio = $\sim 2mg/l$

13. DISPOSAL CONSIDERATIONS

Consult Local Authority for regulations regarding waste disposal

14. TRANSPORT REGULATIONS

Proper shipping name: Not applicable
UN Number: Not applicable
IMDG code: Not applicable
IMDG code: Not applicable
RID/ADR: Not applicable

ICAO/IATA class: Not applicable Hazard warning sign: Not applicable

Marine pollutant:

15. REGULATORY INFORMATION

CHIP labelling -
ethyl EsterSymbol :
St.Andrews CrossHazard : Irritant
St.Andrews CrossContains : Lactic Acid
Risk Phrases: R37,

41

 $\underline{Safety\ Phrases} {:}\ S23,\ 24/25$ $\underline{Other\ suggested\ labelling} {:}\ R37 = Irritating\ to\ the\ respiratory\ system;\ R41 = Risk\ of\ serious\ damage\ to\ eyes;$

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.

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

Product Name: P64 - EB FLUSHING SOLUTION

Product Code : LMSPF01*NC** (C/126/***/***) * = Variable pack type & size codes

Revision No: K Date: 05/07

2. COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Chemical Name	<u>%</u>	CAS Number	TSCA Listed	EEC No	Hazard Symbol	Risk Phrases
Lactic Acid Ethyl Ester	40 - 60	687-47-8	4	211-694-1	St Andrews Cross	R37, 41
2-(2-Butoxyethoxy) Ethanol	40 - 60	112-34-5	4	203-961-6	St Andrews Cross	R36

R36/37 = Irritating to the eyes and the respiratory system; R41 = Risk of serious damage to eyes; The remaining ingredients, do not present a health hazard within the meaning of the EC/ CHIP 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^oC), 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:

Substance listed Long term (8 Hrs) Short term (10 min) in EH40/-ppm mg/m^3 ppm mg/m^3

Lactic Acid Ethyl Ester Not assigned by HSE (1) or ACGIH (2) 2-(2-Butoxyethoxy)Ethanol Not assigned by HSE (1) or ACGIH (2)

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

Form: Coloured liquid pH: n/a **Boiling** Point: ~190°C

Flashpoint: ~61°C

Melting Point : \sim -34 $^{\circ}$ C Vapour Pressure: ~ 0.8 mm Hg @ 20°C Vapour Density : ~ 4.5 (Air = 1) Solubility in Water: Miscible in water Density: Approx. 1.0

Autoignition Point: ~ 300 °C 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

 LD_{50} : Acute / oral / rat : > 3000mg/kg

12. ECOLOGICAL INFORMATION

Readily biodegradable; Bio-accumulation unlikely, hydrolyses in presence of water, acids, bases

2-(2-Butoxyethoxy)Ethanol: LC₅₀/48h/Leuciscus idus = 1805-2304mg/l

13. DISPOSAL CONSIDERATIONS

Consult Local Authority for regulations regarding waste disposal

14. TRANSPORT REGULATIONS

Proper shipping name: Not applicable
UN Number: Not applicable
IMDG code: Not applicable
IMDG code: Not applicable
RID/ADR: Not applicable

ICAO/IATA class: Not applicable Hazard warning sign: Not applicable

Marine pollutant:

15. REGULATORY INFORMATION

<u>CHIP labelling</u> - <u>Symbol</u> : St Andrews Cross <u>Hazard</u> : Irritant <u>Contains</u> : Lactic Acid Ethyl Ester Risk Phrases : R36/37, 41 & 2-

Butoxyethoxy)Ethanol

Safety phrases: S23, 25

Other suggested labelling:

R36/37 = irritating to the eyes and the respiratory system; R41 = Risk of serious damage to eyes

S23 = Do not breathe vapour; S25 = Avoid contact with 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.