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Material Safety Data Sheet**P.O.I. JUMBO INK**

Date 10/1/99 Revision A

Section 1 - Product and Company Identification**General Use:** Ink for writing and marking instruments**Manufacturer:****LIQUI-MARK****130 SWALM STREET****WESTBURY, NEW YORK 11590-4820****PHONE (information & emergency) 516-333-5100****FAX 516-333-5396**

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Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
ETHYL LACTATE	9764.3	22-58
POLYPALE RESIN	NONE	< 6.0
SOLVENT RED 160	70851.4.1	< 3.0
SOLVENT YELLOW 162	489707.5046	< 4.5
DENATURED ETHANOL	NA	35-58
SOLVENT BLUE 7	2390-60-5	< 5.0
SOLVENT RED 208	N.E.	< 3.0
SOLVENT BLUE 38	1328.51.4	3.0
SOLVENT BLUE 70	9477.77.7	< 5.0
SOLVENT RED 68	NJKA#:18881400.5 220P	16.0
POLYMERIC BOND COLORANT		> 4.0
SOLVENT YELLOW 173	68239-62-3	2.0
METAL COMPLEXED AZO DYE MIXTURE	NONE	22.5
BLEND OF DYE SOLVENT YELLOW 161 AND SOLVENT RED 49		10

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Ingredient	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED
ETHYL LACTATE			ORAL RAT LD50=2500MG/KG/ DERMAL LD50=5G/KG
POLYPALE RESIN	15PPM	N.E.	ORAL RAT LD50= >5G/KG
SOLVENT RED 160			
SOLVENT YELLOW 162			
DENATURED ETHANOL			
SOLVENT BLUE 7			
SOLVENT RED 208			ORAL RAT LD50=13.3G/KG:DERMAL LD50=20MG/KG

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SOLVENT BLUE 38			ORAL RAT LD50- >77MG/KG
SOLVENT BLUE 70			ORAL RAT LD50- >10 G/KG
SOLVENT RED 68			ORAL RAT LD50- > 2G/KG
POLYMERIC BOND COLORANT		N.E.	ORAL RAT LD50- 27.75 ML/KG
SOLVENT YELLOW 173			
METAL COMPLEXED AZO DYE MIXTURE		N.E.	
BLEND OF DYE SOLVENT YELLOW 161 AND SOLVENT RED 49		N.E.	

Section 3 - Physical and Chemical Properties

Appearance and Odor: LIQUID--VERY SLIGHT
ALCOHOL LIKE

Vapor Pressure: 5 MM HG AT 20 DEG C

Vapor Density (Air=1): 3.12

Surface Tension: N.D.

Specific Gravity (H₂O=1, at 4 °C): 0.850-0.920

Water Solubility: INFINITELY

Boiling Point: 248 DEG C

Freezing/Melting Point: ND

Viscosity: ND

Evaporation Rate: SLOWER THAN ETHER

Section 4 - Fire-Fighting Measures

Flash Point: 500 DEG F

Flash Point Method: COC

Autoignition Temperature NOT DETERMINED:

LEL: N.A.

UEL: N.A.

Flammability Classification: N.A.

Extinguishing Media: WATER FOG, ALCOHOL RESISTANT FOAM, CO₂, DRY CHEMICAL

Unusual Fire or Explosion Hazards: KEEP VAPORS AWAY FROM POSSIBLE IGNITED SOURCES

Fire-Fighting Instructions: WEAR POSITIVE-PRESSURE, SELF CONTAINED BREATHING APPARATUS

Section 5 - Stability and Reactivity

Stability: STABLE

Polymerization: WILL NOT OCCUR

Chemical Incompatibilities: OXIDIZING MATERIAL

Conditions to Avoid: STABLE UNDER NORMAL STORAGE CONDITIONS

Hazardous Decomposition Products: NONE KNOWN

Section 6 - Health Hazard Information**Potential Health Effects**

Primary Entry Routes: NOT HAZARDOUS

Target Organs:

Acute Effects > 5.0 G/KG

Inhalation:

Eye:

Skin:

Ingestion:

Carcinogenicity:

Medical Conditions Aggravated by Long-Term Exposure: MEDICAMENTS TAKEN CAN INCREASE THE NARCOTIC EFFECT OF ETHANOL

Chronic Effects: N.D.

Emergency and First Aid Procedures

Inhalation: THE ODOR IS OBJECTIONABLE AT 1000PPM ; HIGHER LEVELS PRODUCE EYE, NOSE AND THROAT IRRITATION AND INTOLERABLE AT 1000PPM. REMOVE TO FRESH AIR

Eye Contact: MAY CAUSE SLIGHT TRANSIENT (TEMPORARY) EYE IRRITATION - IRRIGATE IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ADVICE.

Skin Contact: PROLONGED OR REPEATED EXPOSURE MAY CAUSE SKIN IRRITATION . WASH OFF IN FLOWING WATER OR SHOWER.

Ingestion: AMOUNT INGESTED INCIDENTAL TO INDUSTRY. HANDLING NOT LIKELY TO CAUSE INJURY. INDUCE VOMITING IF LARGE AMOUNTS ARE INGESTED AND CONSULT MEDICAL PERSONNEL

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 7 - Spill, Leak, and Disposal Procedures

Spill /Leak Procedures: SOAK UP WITH SUITABLE NON-REACTIVE ABSORBANT MATERIAL. COLLECT WITH RUBBER SHOVEL INTO CONTAINER FOR DISPOSAL

Containment:

Cleanup:

Regulatory Requirements: BURN IN AN APPROVED INCINERATOR IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS

Disposal:

Disposal Regulatory Requirements:

Container Cleaning and Disposal:

Ecological Information:

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Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: LOCAL EXHAUST

Administrative Controls:

Respiratory Protection: USE DUST/MIST RESPIRATOR

Protective Clothing/Equipment: USE RUBBER GLOVES AND GOGGLES

Safety Stations:

Contaminated Equipment: Comments:

Section 9 - Special Precautions and Comments

Handling Precautions: HANDLE WITH REASONABLE CARE, AVOID BREATHING APPARATUS

Storage Requirements: PAY ATTENTION TO THE USUAL RULES FOR HANDLING CHEMICALS

Prepared By: R. DINGLAS

Revision Notes: