

20841-XXXX**MATERIAL SAFETY DATA SHEET**

dated:

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Uchida of America, Corp.
 3535 Del Amo Blvd.
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Chemical Family Paint Type Trade Name #4300 LE PEN INK

<u>1. INGREDIENTS</u>	<u>%</u>	<u>TLV (unit)</u>
C. I. Basic Violet 1	<5.5	N.A.
C. I. Basic Green 2	<5.5	N.A.
C. I. Basic Orange 2	<5.5	N.A.
Ethylene Glycol	40	50ppm
Detergent	2	N.A.
Purified Water	Residual part	N.A.

2. PHYSICAL DATA

Boiling Point (Celsius degree)	102C
Solubility in Water	soluble
Vapor Pressure at 25C	15mmHg
Vapor Density (Air=1)	not measured
Evaporation Rate (Bu·Ac=1)	unknown
Appearance and Odor	Colored liquid substantially odorless
Specific Density	1.0-1.1
Percent Volatile	60-90

3. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): none (C.C.)

FIRE-FIGHTING MEASURES: The inks that contain much water, is not inflammable, no special precaution is necessary. But pen bodies are flammable, so in case of fire. Pouring of a plenty of water is the effective method to extinguish.

4. HEALTH HAZARD DATA

THRESHOLD LIMITED VALUE: not measured

EFFECTS OF OVEREXPOSURE: The main components of these inks are glycols and several additives. Ethylene glycol causes some damage to kidney. It is oxidized in vivo in to oxalic acid and insoluble Ca-oxalate may be formed kidney.

EMERGENCY AND FIRST AID PROCEDURES:

After inhalation: Using high-boiling solvents. the pressure is low and damages by inhalation are substantially negligible.

After skin contact: Immediately rinse through with soap and water.

After eye contact: Immediately rinse the stained eye with plenty of water, and call on a physician.

After consumption: The used pens are present burn out at the place where no influence in human health.

5. REACTIVITY DATA

STABILITY: Stable. These inks are stable at room temperature and inert to the ordinary materials.

HAZARDOUS POLYMERIZATION: Will not occur. Doesn't polymerize. Ethylene glycol is somewhat toxic in the case of swallowing.

6. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN MATERIAL IS RELEASED OR SPILLED: Wipe the material with cloth and wash water.

WASTE DISPOSAL METHOD: The best disposal process is not yet established, but at present it may be probably recommended to burn out the waste stock of used pen at distant place from human life.

7. SPECIAL PROTECTION INFORMATION

RESPIRATION PROTECTION (Specify type): No special precaution is necessary.

VENTILATION: unnecessary

PROTECTIVE GLOVES: To protect the staining gloves.

Avoid contact skin and eye with inks. Use gloves and goggles not to contact the inks in the case of handling large amount of inks.

8. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Stains of skin with these inks are somewhat difficult to remove. So attention may be paid not to stain the skin. Stock the pens in the cool, well-ventilated, fire-protective place. Discard the pen in the place where no pollutions occur.

OTHER PRECAUTIONS: Keep out reach of baby or children.