MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

• PRODUCT NAME

ARTLINE® 450 INK (White, Yellow, Orange, Silver)

• NAME OF SUPPLIER: Shachihata Inc.

NAME OF DEPARTMENT: Product Development Department
 ADDRESS: 1661 W. 240th Street, Harbor City, CA 90710 USA

• TELEPHONE NUMBER: (800) 424-9300 - 24 hour emergency contact

(310) 530-4445 - During business hours

• FAX NUMBER: (310) 530-2892

HEALTH: 2 CODE: 0=MINIMAL
FLAMMABILITY: 2 1=SLIGHT
REACTIVITY: 0 2=MODERATE
PERSONAL PROTECTION: B 3=SERIOUS
4=SEVERE

SECTION 2: HAZARDOUS INGREDIENTS **OSHA-PEL** CAS NO **ACGIH-TLV** PERCENT INGREDIENT 110-80-5 **200 PPM** 5 PPM 3.00 Cellosoive Solvent* 111-15-9 200 PPM 5 PPM Cellosoive Acetate 12.00 123-42-2 **50 PPM** 50 PPM Diacetone Alcohol 12.00 111-77-3 None Estab None Estab 18.00 Methyl Carbitol 1000 PPM 1000 PPM 64-17-5 9.00 Ethyl Alcohol

This chemical is subject to the reporting requirements of SARA TITLE III, Section 313 of the emergency planning and community right to know act of 1986 and of 40 CFR 372. This product is in compliance with the EPA TSCA inventory.

SECTION 3: PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point: 336F
Melting Point: -130 F
Vapor Density: 4.0
Specific Gravity: 0.9605
Reactivity in Water: None
Solubility in Water: Slight
Auto Ignition: 715 F

Vapor Pressure: <1 mm hg

Appearance & Odor: Mobile Liquid, Mild Odor Appearance & Odor: VOC: 35.84 GMS/Liter

LEL/UEL %: 1.5 14.0 Flash Point: 120 F Method: Closed Cup

SECTION 4: FIRE & EXPLOSION DATA
Extinguishing Media: Carbon Dioxide
Extinguishing Media: Dry Chemical
Extinguishing Media: Alcohol - Type Foam

Extinguishing Media: Alcohol - Type Foam Extinguishing Media: Universal - Type Foam

SECTION 4: FIRE & EXPLOSION DATA (Continued)

Extinguishing Media: Waterspray

Special Fire Procedures: Wear self-contained breathing apparatus Special Fire Procedures: Wear protective clothing and equipment Special Fire Procedures: Use waterspray to cool fire-exposed area Special Fire Procedures: Use waterspray to protect personnel

Unusual Hazards: Wear suitable eye protection to prevent eye contact

SECTION 5: REACTIVITY DATA

Stable, Y=Yes, N=No: Y

Conditions to Avoid: Heat, sparks and open flame

Incompatibility: Strong oxidizing agents

Hazardous Decomposition: Burning will produce CO2 and/or CO

Hazardous Polymerization: Will not occur

Conditions to Avoid: None

SECTION 6: Health Hazards

Acute: Headache, Nausea, Vomiting

Chronic: Skin and eye irritant

Chronic: Liver and kidney injury from overexposure

Signs & Symptoms of Exposure: Headache, nausea, vomiting

Signs & Symptoms of Exposure: Breathing difficulties

Signs & Symptoms of Exposure: Weakness

Signs & Symptoms of Exposure: irritation to eyes, nose & respiratory tract

Medical Conditions aggravated: In lab inhalation studies with animals, cellosolve & cello Medical Conditions aggravated: acetate have cause birth defects in females and reproductive

Medical Conditions aggravated: problems in males. No human results cited.

Is chemical listed as carcinogen or potential carcinogen:

National Toxicololgy Program, Y=Yes, N=No: N IARC Monographics, Y=Yes, N=No: N

OSHA, Y=Yes, N=No: N

First Aid for Inhalation: Remove to fresh air if overcome by vapor

First Aid for Eyes: Irrigate with clean water for 15 minutes
First Aid for Skin: Wash with soap and water; change clothing
First Aid for Ingestion: Give two glasses of lukewarm water

First Aid for Ingestion: Induce vomiting; call doctor

Routes of entry for inhalation: Avoid prolonged breathing of vapors

Routes of entry for eyes: Avoid contact with the eyes

Routes of entry for skin: Avoid repeated or prolonged skin contact

Routes of entry for ingestion: Do not take internally

SECTION 7: SPECIAL PRECAUTIONS & SPILL/LEAK PROCEDURES

Handling & Storage: Keep container closed when not in use Handling & Storage: Use only with adequate ventilation Handling & Storage: Avoid prolonged breathing of vapors Handling & Storage: Keep away from heat and flame Steps if Spilled: Remove sources of ignition; ventilate Steps if spilled: Contain & cover spill with an absorbent Steps if spilled: Do not allow spill to enter waterways

Waste Disposal: Incinerate in chemical furnace

Waste Disposal: Must conform to local, state & federal regulations

SECTION 8: SPECIAL PROTECTION INFORMATION

Respiratory Protection: General room ventilation is adequate

Ventilation: Provide adequate cross air circulation

Local Exhaust: Preferable Mechanical: Acceptance

Special: NIOSH Approved respirator for high vapor

Protective Gloves: Chemical impervious

Eye Protection: Splash glasses Other Protection: Eyewash station

Work/Hygienic Practices: Practice reasonable care & caution when using ink.

SPECIAL MESSAGE SECTION:

The hazards listed on this MSDS are taken from the MSDS for each of the ingredients in this mixture. In most cases, the maximum form of hazard is represented here. The TLV's represent the conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect. It must be remembered that each individual reacts differently and some may experience discomfort while others do not. This MSDS is presented so that each individual will have the information to deal safely with the use of this product. All materials TSCA listed.

DISCLAIMER SECTION:

Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim all liability for any use of this material. Information contained herein is given in good faith and believed to be true and accurate. But all statements or suggestions are made without any warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material or results to be obtained from the use thereof.

Information on MSDS supplied by ink mfg.