MATERIAL SAFETY DATA SHEET

DATE PREPARED: 03/15/2004
MSDS No: 400230
UVR-110W

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: UVR-110W
Product Description: UVR Legend Ink
Product Name: UVR-110W
Chemical Family: UV Curable Legend Ink

MANUFACTURER:
Taiyo America, Inc.
2675 Antler Drive
Carson City, NV 89701
Customer Service: 775-885-9959

24 HR. EMERGENCY TELEPHONE NUMBERS:
Emergency Contact: Phillip Harrison
Emergency Phone 775-885-9959

2. COMPOSITION/INFORMATION ON INGREDIENTS

		wt.%	CAS Registry #
Trimethylolpropane Triacrylate		17 – 20	15625-89-5
2-Hydroxyethyl Methacrylate		7 – 8	868-77-9
Epoxy Acrylate Resin	(Trade Secret)	10 – 11	

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:
Viscous white ink. Slight Mild Odor.

POTENTIAL HEALTH EFFECTS

EYES:
May cause severe eye irritation.

SKIN:
May cause moderate skin injury.

May cause skin sensitization, an allergic reaction, which becomes evident on re exposure to this material.

INGESTION:
This product may be slightly toxic.

INHALATION:
May cause respiratory tract irritation.
High vapor concentrations may cause headaches, dizziness and nausea.

SUBCHRONIC/CHRONIC TOXICITY

CHRONIC:

Prolonged or repeated contact can result in drying of the skin which may result in skin irritation and dermatitis (rash).

CARCINOGENICITY:

NTP, IARC, and OSHA sources checked: Not Listed.

4. FIRST AID MEASURES

EYES:

Immediately flush eyes with plenty of water for 15 minutes. Get medical attention, if irritation persists.

SKIN:

Wash skin with soap and plenty of water.

INGESTION:

Do not induce vomiting. Give milk or water. Get medical attention.

INHALATION:

If breathing becomes difficult, remove to fresh air.
If symptoms persist give oxygen and seek medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: 273°F 134°C SETA Flash CC

FLAMMABLE CLASS:

OSHA: Combustible
DOT: Not Classified

GENERAL HAZARD:

The Uniform Fire Code flammability rating for this product is: Class III-B Combustible Liquid.
If burning, this material may produce hazardous fumes or hazardous decomposition products.

EXTINGUISHING MEDIA:

Use carbon dioxide, foam, dry chemical or water spray when fighting fires involving this material.

HAZARDOUS COMBUSTION PRODUCTS:

Combustion products may be toxic. May produce various carbon oxides and hydrocarbons.

EXPLOSION HAZARDS:

Sealed containers may build up pressure and rupture when exposed to high heat (fire).

FIRE FIGHTING PROCEDURES:
Remove sealed containers from the vicinity of the fire.
Use normal fire fighting procedures for burning liquids.

FIRE FIGHTING EQUIPMENT:
Use self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode with appropriate turn-out gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:
Absorb the spilled material with inert material. Scrub the area with detergent and water.

ENVIRONMENTAL PRECAUTIONS:
WATER SPILL:
Contain, minimize dispersion and collect as soon as possible.

LAND SPILL:
Prevent from entering drain, sewer, stream or other bodies of water. Transfer absorbent, soil and other materials to containers for disposal.

SPECIAL PROTECTIVE EQUIPMENT:
Protective eyewear, impervious gloves, air purifying respirator recommended.

7. HANDLING AND STORAGE

HANDLING:
Avoid contact with skin, eyes and clothing. Use only with adequate ventilation.

STORAGE:
Store in a cool place in original sealed container away from sunlight and heat.
Recommended storage below 68 F to maintain shelf life.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Good general mechanical ventilation recommended.

PERSONAL PROTECTION
EYES AND FACE:
Wear safety glasses with side shields, goggles or face shield to prevent splashes into the eyes.

SKIN:
In general avoid skin contact, wear impervious gloves.

RESPIRATORY:
Not necessary for adequately ventilated work area.

PROTECTIVE CLOTHING:
As necessary to avoid contact with skin.

WORK HYGIENIC PRACTICES:
Wash hands with soap and water after using material. Do not use solvent to remove product from skin.

OTHER USE PRECAUTIONS:
This product contains inorganic fillers. In normal use as a liquid soldermask the inorganic fillers are not hazardous. Dust from sanding, drilling or routing of the cured soldermask may pose an inhalation hazard.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Odor: Slight characteristic odor.
Appearance: White viscous liquid.
Percent Volatile: 0
Vapor Pressure: <0.01 mmHg at 25°C
Vapor Density: ~1.07 (Air = 1)
Boiling Point: 95°C 10 mmHg
Freezing Point: Not Established
Melting Point: None
Solubility in Water: Not Established
Evaporation Rate: <0.1 (n-Butyl Acetate=1)
Specific Gravity: 1.7 (water=1)
(VOC): 0

COMMENTS:
Contains no components volatile at normal storage and use temperatures.

10. STABILITY AND REACTIVITY

STABLE: No

HAZARDOUS POLYMERIZATION: Yes

STABILITY:
This product is stable under normal operating conditions.

POLYMERIZATION:
Hazardous polymerization may occur at high temperatures.

CONDITIONS TO AVOID:
Avoid high temperatures, sunlight.

HAZARDOUS DECOMPOSITION:
Normal combustion products.

INCOMPATIBLE MATERIALS:
Strong oxidizers, peroxides, rust, strong bases, amines and active epoxy curing agents.

11. TOXICOLOGICAL INFORMATION

GENERAL COMMENTS:
No specific toxicological data is available for this product.

12. ECOLOGICAL INFORMATION

GENERAL COMMENTS:
No specific environmental data is available.

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL:
Dispose of in accordance with all Federal, State and Local regulations. Keep out of sewers and waterways.

RCRA/USPA WASTE INFORMATION:
Not a RCRA waste material.

14. TRANSPORT INFORMATION

SPECIAL SHIPPING NOTES:
Not DOT regulated.

15. REGULATORY INFORMATION

UNITED STATES

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA Regulatory: This product complies with all applicable rules or orders under TSCA.

RCRA STATUS:

Not a RCRA hazardous waste.

CANADA

CANADIAN ENVIRONMENTAL PROTECTION ACT:

This product contains substances not included in the DSL or the NDSL, in the following concentrations in % by weight:
Polymer: 7.5

16. OTHER INFORMATION

Approved by: Phillip Harrison Title: Plant Manager
Approval date: 06/30/2004
Information Contact: Phillip Harrison

REVISION SUMMARY

Revision #: 2

This MSDS replaces the September 17, 2003 MSDS. Any changes in information are as follows:
In Section 1
Date Prepared

In Section 9
Specific Gravity (to) VOC (from) Section 9 Footnotes

In Section 15
CEPA

In Section 16
Manufacturer Disclaimer

HMIS CODES

Fire: 1 Health: 2 Reactivity: 2

MANUFACTURER SUPPLEMENTAL NOTES:

This product contains no environmentally restricted substances as listed in Sony Technical Standard SS-00259 second edition.

MANUFACTURER DISCLAIMER:

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.