

AS-500 DJ

UV CURABLE ETCH RESIST

- ① **One Component Etching Resist**
- ① **Screen Print Application**
- ① **Blue in Color**
- ① **Excellent Printing Characteristics**
- ① **Wide Processing Window**
- ① **RoHS Compliant**
- ① **Strips in Flakes that can be filtered out of stripper solution**

PROCESSING PARAMETERS FOR AS-500 DJ

AS-500 DJ is a one-component UV Cure etching resist. **AS-500 DJ** is applied by flood screen-printing. Flake action stripping allows for the **AS-500 DJ** to be removed by filtration from the stripping solution. This will increase the life of the stripper and reduce waste water contamination. **AS-500 DJ** shows excellent performance in continuous printing and resistance to etchant. All Taiyo America products comply with the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the Restriction of the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment.

AS-500 DJ SPECIFICATIONS

Color:	Blue
Viscosity:	250 Ps
Specific Gravity:	1.54

PRE-CLEANING

Prior to the application of **AS-500 DJ**, the copper surface must be free of all contaminants such as oils, oxides and particulate. For RTF/DSTF type foils commercial acid cleaners are adequate, for standard foils a persulfate or peroxide/sulfuric or other proprietary microetch is recommended. A 3 cascade rinse followed by a DI final rinse is recommended. The final dryer should provide a dry, stain free surface.

AS-500 DJ is also compatible with traditional micro etch process as well as mechanical cleaning methods such as pumice scrubbing, aluminum oxide jet scrub, and brush scrubbing systems.

SCREEN PRINTING Method: Single Sided and Double Sided Screening

- Screen Mesh: 300 – 325 tpi
- Screen Mesh Angle: 22.5° Bias
- Screen Tension: 20 - 28 Newtons
- Squeegee: 60 – 80 durometer
- Squeegee Angle: 27 – 35°
- Printing Mode: Flood / Print / Print
- Flood Pressure: 20 – 30 psi
- Printing Speed: 2.0 – 9.9 inches/sec
- Printing Pressure: 70 – 100 psi

PROCESSING PARAMETERS FOR AS-500 DJ

UV Cure AS-500 DJ requires a UV Cure. The UV Cure requires a high-pressure mercury-vapor or metal-halide lamp. Below are guidelines for UV Curing **AS-500 DJ**.

Type of UV Lamps	Energy	Number of Lamps	Conveyor Speed
High Pressure Mercury Vapor Lamp	800 mJ/cm ²	3 – Lamps	4-6 m/min
	1200 mJ/cm ²	3 – Lamps	3-5 m/min
Metal Halide Lamp	800 mJ/cm ²	3 – Lamps	5-7 m/min
	1200 mJ/cm ²	3 – Lamps	4-6 m/min
UV Energy Readings	800 – 1200 mJ/cm² (measured with an International Light IL-90 radiometer)		

ETCHING / PLATING

- Etchant: Acid
- Plating: ENIG or Acid Based Plating Chemistries

STRIPPING

- Stripper: 2.0 – 3.0% by wt. of NaOH
- Temperature: 104 – 122°F (40 – 50°C)

For Process Optimization please contact your local Taiyo America Representative

FINAL PROPERTIES

Test Item	Test Conditions	Results
Adhesion	Internal Test	100/100
Pencil Hardness	Internal Test	H
Resistance to Etching Solution Immersion Method	Cupric chloride 200 g/l, HCl 150 g/l, 50°C, 2 min	Pass, No ink Peeling
Stripping Immersion Method	2wt% NaOH 25°C / 15 seconds	Pass, No Ink Residue

Taiyo America, Inc. (TAIYO) warrants its products to be free from defects in materials and workmanship for the specified warranty period (**AS-500 DJ Warranty period is 6 Months**) provided the customer has, at all times, stored the ink at a temperature of 68°F or less. TAIYO accepts no responsibility or liability for damages, whether direct, indirect, or consequential, resulting from failure in the performance of its products. If a TAIYO product is found to be defective in material or workmanship, its liability is limited to the purchase price of the product found to be defective. TAIYO MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. TAIYO'S obligation under this warranty shall not include any transportation charges or costs of installation or any liability for direct, indirect, or consequential damages or delay. If requested by TAIYO, products for which a warranty claim is made are to be returned transportation prepaid to TAIYO'S factory. Any improper use or any alteration of TAIYO'S product by the customer, as in TAIYO'S judgment affects the product materially and adversely, shall void this limited warranty.