

## ORDYL Alpha 300 DRY FILM

PRODUCT DATA SHEET  
Edition 01 - 29 March 2013

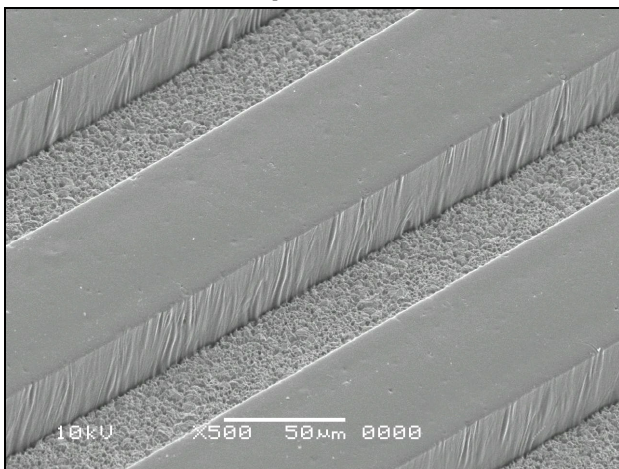
### PRODUCT DESCRIPTION

Ordyl Alpha 300 is a negative, aqueous dry film specifically designed to have extremely high resistance in alkaline solutions and galvanic Nickel/Gold. It can be exposed both with LDI and standard UV lamps.

Alpha 300 is developable and strippable in mildly alkaline solutions and offers superior performances and resistance to leaching in all the most commonly used plating bath in PCB manufacturing.

Ordyl Alpha 300 guarantee good adhesion on copper surface. This type of dry film has a good flexibility and ensure good tenting performances even on large tooling holes; this can be achieved starting from 40  $\mu\text{m}$  thickness.

**Alpha 350**



#### Main Features:

- Extreme resistance in alkaline solutions
- High resistance in Ni-Au Plating

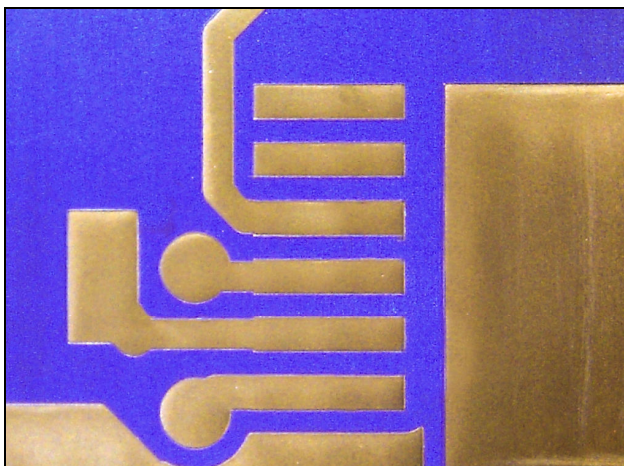
#### Typical Application:

- Acid and alkaline etching
- Tenting process
- Copper, tin, tin/lead plating
- Ni-Au Plating

#### Available Thickness:

- 30  $\mu\text{m}$  (1.2 mils) for acid and alkaline etching
- 40  $\mu\text{m}$  (1.6 mils) and 50  $\mu\text{m}$  (2mils) for standard application and Ni-Au Plating
- 75  $\mu\text{m}$  (3 mils) for standard application, Ni-Au Plating and tin/leads stripping mask

**Alpha 375**



## PROCESS INFORMATION

### Surface preparation

Alpha 300 guarantee good adhesion on the following surface:

- Vendor copper
- Electroless copper and panel plated copper, both unscrubbed and treated with pumice and brush
- Chemical microetched surface

We recommend good surface cleaning in order to obtain optimal performance.

### Lamination

Panels must be thoroughly dry prior to lamination.

	MANUAL LAMINATOR	AUTOMATIC LAMINATOR
<b>Pre-heat</b>	(OPTIONAL)	(OPTIONAL)
<b>Hot roll temperature</b>	105 – 125°C (221 – 257°F)	105 – 125°C (221 – 257°F)
<b>Lamination roll pressure</b>	2.5 – 3.5 bar (35 – 50 Psi)	2.5 – 6.0 bar (35 – 85 Psi)
<b>Lamination speed</b>	1 – 3m/min (3 – 10 feet/min)	1 – 3m/min (3 – 10 feet/min)
<b>Seal temperature</b>	---	40-80°C (105-180°F)
<b>Seal pressure</b>	---	3.0-6.0 bar
<b>Seal time</b>	---	1-4 sec.

### Board exit temperature

Inner layer 50-70°C (122-160°F)

Outer layer 45-60°C (110-140°F)

### Post lamination Hold Time

We recommend a hold time of at least 20 min, or in any case the minimum hold time necessary to allow panels to cool down to room temperature.

## Exposure

We recommend using UV lamps or laser source with emission peak at 360 – 380 nm.

The following parameters are referred to:

8 Solid STEP of SST21

13-15 Solid STEP of RST25

	Alpha330	Alpha340	Alpha350	Alpha375
<b>Energy (mJ/cm<sup>2</sup>)</b>	40-60	50-70	80-100	100-120
<b>Resolution</b>	30 µm (1.2 mils)	40 µm (1.6 mils)	50 µm (2 mils)	75 µm (3 mils)

## Hold time after exposure

We recommend a minimum hold time after exposure of at least 15 minutes.

## Developing

	Na <sub>2</sub> CO <sub>3</sub>		K <sub>2</sub> CO <sub>3</sub>	
	Range	Optimal	Range	Optimal
<b>Concentration</b>	0.8 – 1.2%	0.9%	0.6 – 1.0 %	0.8%
<b>Temperature</b>	26–32°C (80–90°F)	29°C (85°F)	26–30°C (80–86°F)	28°C (82°F)
<b>Spray pressure</b>	1.2–1.8 bar (17–25 Psi)	1.5 bar (22 Psi)	1.2–1.8 bar (17–25 Psi)	1.5 bar (22 Psi)
<b>Break Point</b>	50 – 65%			
<b>Rinsing water</b>	9-15°dH (150–250 ppm CaCO <sub>3</sub> )	12°dH (213 ppm CaCO <sub>3</sub> )	9-15°dH (150–250 ppm CaCO <sub>3</sub> )	12°dH (213 ppm CaCO <sub>3</sub> )

We recommend a rinse module with a length of a least 2/3 of the developing module.

The rinse water temperature should be preferably between 15-25°C (59-77°F), optimal at 20°C (68°F).

## Developing time (B.P. 60%)

	Alpha330	Alpha340	Alpha350	Alpha375
<b>Developing time</b>	35 sec.	45 sec.	55 sec.	90 sec.
<b>Dry Film load 1g/l</b>	0.03 m <sup>2</sup> /l	0.025 m <sup>2</sup> /l	0.017 m <sup>2</sup> /l	0.012 m <sup>2</sup> /l

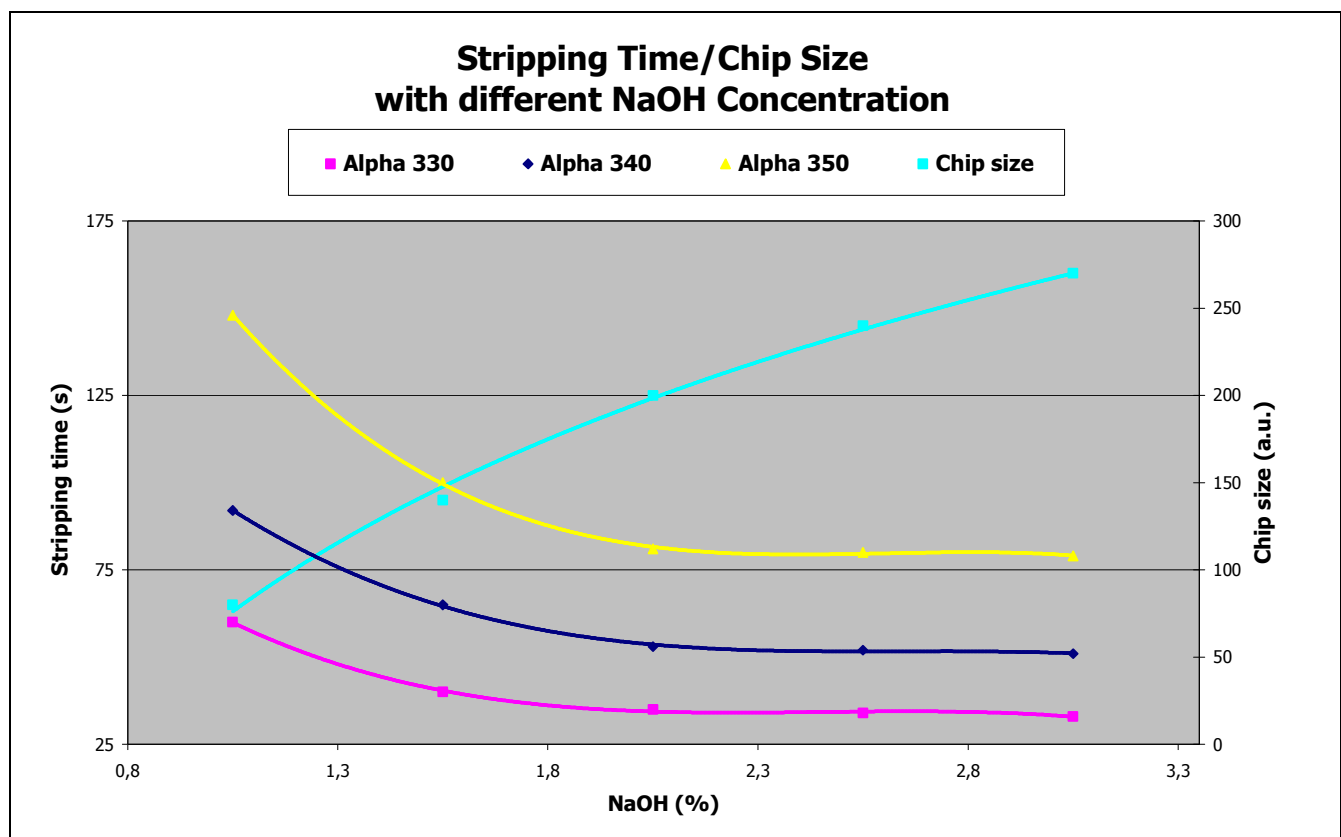
We recommend a maximum Dry Film load of 3 g/l.

We recommend the use of "Ordyl Antifoam C".

## Stripping

Stripper	NaOH / KOH
Concentration	1.0 – 3.0%
Temperature	40–60°C (104–140°F)
Spray pressure	1.5 – 4.0 Bar (22–58 Psi)
Break Point	40 – 60%

We recommend the use of "Ordyl Antifoam C".



Data in the graph are obtained with laboratory dipping test.

### Proprietary strippers

Can be used in order to obtain smaller flakes, higher stripping speed, reduce copper oxidation and Tin or Tin/Lead attack.

We recommend the use of "Ordyl Stripper 5600".

**For any other technical information (storage conditions, packaging information, etc.) refer to the Ordyl Specification (Form EE.P11.CV.02-ww)**

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