

ORDYL Alpha 800 DRY FILM

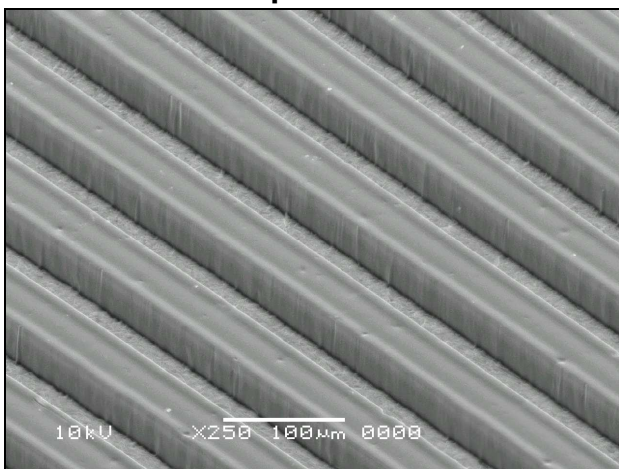
PRODUCT DATA SHEET
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PRODUCT DESCRIPTION

Ordyl Alpha 800 is a negative, aqueous universal dry film designed to be used for the most common PCB applications. Alpha 800 can be exposed with LDI or with standard UV lamps and is developable and strippable in mildly alkaline solutions. It offers superior performances and resistance to leaching in all the most commonly used plating bath in PCB manufacturing.

Ordyl Alpha 800 is particularly recommended for innerlayers thanks to excellent developing properties that leaves the copper surface very clean and ready for the black oxide process. This type of dry film ensure good tenting performances even on large tooling holes; this can be achieved starting from 40 μm thickness.

Alpha 830



Main Features:

- Extremely flexible and high conformability
- Easy stripping with small flake size

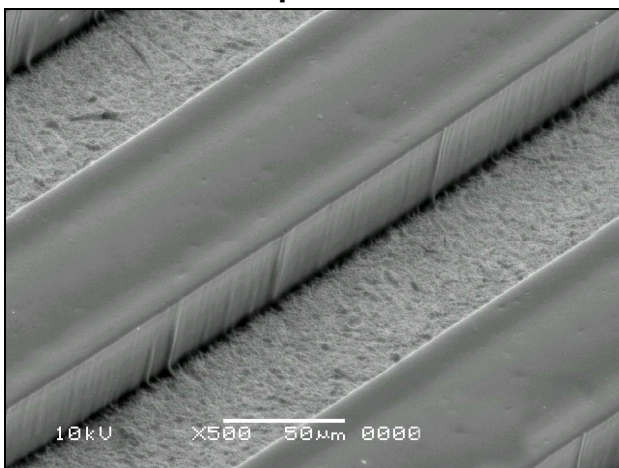
Typical Application:

- Acid etching
- Tenting process
- Copper, tin, tin/lead plating

Available Thickness:

- 25 μm (1.0 mils) and 30 μm (1.2 mils) for Innerlayer process
- 40 μm (1.6 mils) and 50 μm (2 mils) for standard application

Alpha 840



PROCESS INFORMATION

Surface preparation

Alpha 800 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
Pre-heat	(OPTIONAL)	(OPTIONAL)
Hot roll temperature	105 – 125°C (221 – 257°F)	105 – 125°C (221 – 257°F)
Lamination roll pressure	2.5 – 3.5 bar (36 – 50 Psi)	2.5 – 6.0 bar (36 – 87 Psi)
Lamination speed	1 – 3m/min (3 – 10 feet/min)	1 – 3m/min (3 – 10 feet/min)
Seal temperature	---	40 – 80°C (104 – 176°F)
Seal pressure	---	3.0 – 6.0 bar (44 – 87 Psi)
Seal time	---	1-4 sec.

Board exit temperature

Inner layer 50 – 70°C (122 – 158°F)

Outer layer 45 – 60°C (113 – 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.

Hold time should not be over 1 week.

Exposure

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

Optimal exposure at 8 Solid STEP of SST21 (13-15 Solid STEP of RST25).

We recommend to stay between 7-9 Solid STEP of SST21 (10-18 Solid STEP of RST25).

The following parameters are referred to:

8 Solid STEP of SST21

	Alpha 825	Alpha 830	Alpha 840	Alpha 850
Energy (mJ/cm²)	25-30	30-35	35-45	40-50
Resolution	25 µm (1.0 mils)	30 µm (1.2 mils)	40 µm (1.6 mils)	50 µm (2 mils)

Hold time after exposure

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

Developing

	Na ₂ CO ₃		K ₂ CO ₃	
	Range	Optimal	Range	Optimal
Concentration	0.8 – 1.2%	0.9%	0.6 – 1.0 %	0.8%
Temperature	26–32°C (79–90°F)	29°C (84°F)	26–30°C (79–86°F)	28°C (82°F)
Spray pressure	1.2–1.8 bar (17–26 Psi)	1.5 bar (22 Psi)	1.2–1.8 bar (17–26 Psi)	1.5 bar (22 Psi)
Break Point	50 – 65%			
Rinsing water	9-15°dH (150–250 ppm CaCO ₃)	12°dH (213 ppm CaCO ₃)	9-15°dH (150–250 ppm CaCO ₃)	12°dH (213 ppm CaCO ₃)

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%)

	Alpha 825	Alpha 830	Alpha 840	Alpha 850
Developing time	20 sec.	25 sec.	35 sec.	50 sec
Dry Film load 1 g/l (0.13 oz/gal)	0.04 m ² /l (1.6 ft ² /gal)	0.03 m ² /l (1.2 ft ² /gal)	0.025 m ² /l (1.0 ft ² /gal)	0.017 m ² /l (0.7 ft ² /gal)

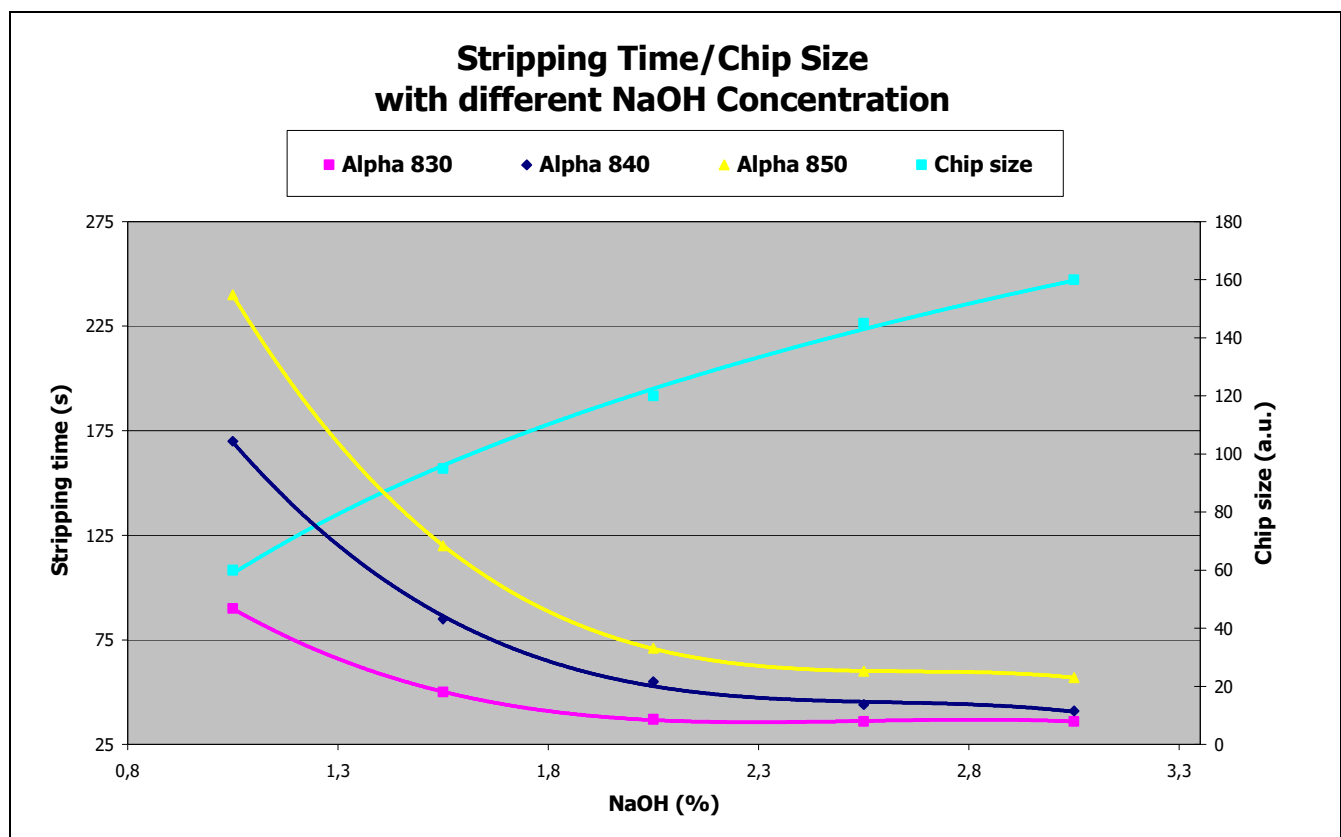
We recommend a maximum Dry Film load of 5 g/l (0.65 oz/gal).

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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