Elga Europe

ORDYL DRY FILM AM 100

PRODUCT DATA SHEET
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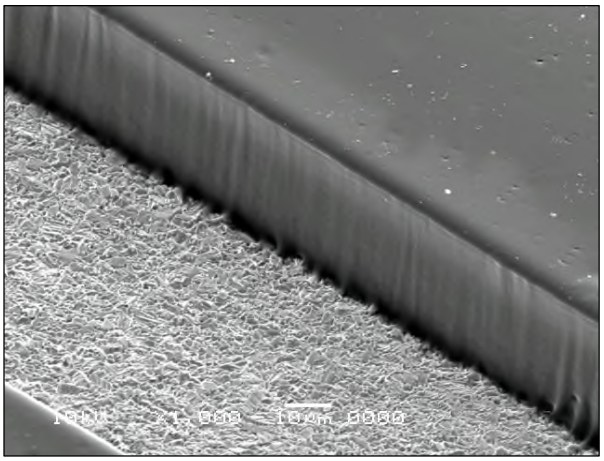
PRODUCT DESCRIPTION

Ordyl AM 100 is a negative, aqueous processable dry film specifically designed to be exposed with LDI but usable also with standard UV lamps.

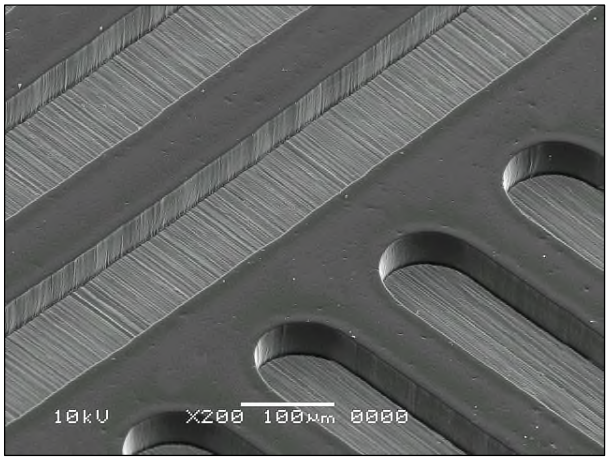
AM 100 is developable and strippable in mildly alkaline solutions and offers superior performances and resistance to leaching in all the most commonly used plating bath in PCB manufacturing.

Ordyl AM 100 has good adhesion on copper surface and for this reason is indicated for direct plating process and in case of surface preparation is not good. This type of dry film ensure good tenting performances even on large tooling holes; this can be achieved starting from 40 µm thickness.

AM 140



AM 150



Main Features:

- Excellent through cure polymerization also with LDI exposure machine
- Good adhesion properties
- High Photospeed
- High flexibility and conformability

Typical Application:

- Acid and alkaline etching
- Tenting process
- Copper, tin, tin/lead plating
- Nickel and Gold plating

Available Thickness:

- 30 µm (1.2 mils), 40 µm (1.6 mils) and 50 µm (2 mils) for standard application
- 75 µm (3 mils) specific for Nickel and Gold plating

PROCESS INFORMATION

Surface preparation

AM 100 guarantee good adhesion on the following surface:

- Vendor copper
- Electroless copper and panel plated copper, both unscrubbed and treated with pumice and brush
- Direct metallization surface
- 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 – 405 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

	AM 130	AM 140	AM 150	AM 175
Energy (mJ/cm^2)	20-25	25-30	30-35	50-60
Resolution	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_2CO_3		K_2CO_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%)

	AM 130	AM 140	AM 150	AM 175
Developing time	30 sec.	40 sec.	60 sec.	95 sec.
Dry Film load 1 g/l (0.13 oz/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)	0.008 m^2/l (0.3 ft^2/gal)

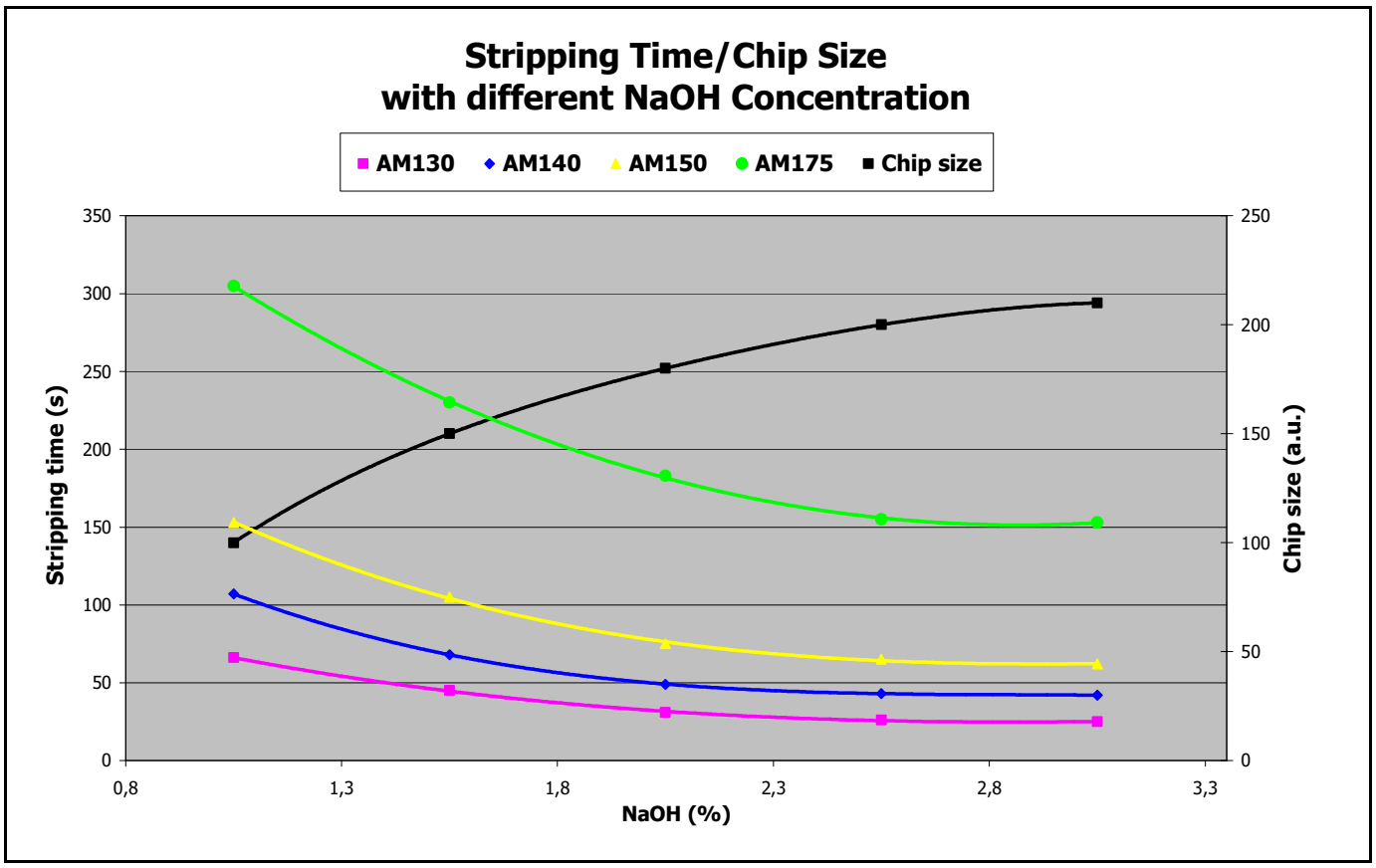
We recommend a maximum Dry Film load of 5 g/l (0.65 oz/gal).

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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No claim shall be entertained after the expiration of the appropriate period mentioned above and the seller's liability by reason of any such claim shall not in any event the purchase price of the goods in respect of which a claim is made. Goods shall not be returned to the seller without the seller's express written permission.

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CERTIQUALITY
CERTIFIED QUALITY MANAGEMENT SYSTEM

HEADQUARTER
Via della Merlata, 8
20014 Nerviano (MI) ITALY
T. +39 0331 58 69 47
F. +39 0331 58 77 51

UNI EN ISO 9001:2015
UNI EN ISO 14001:2015
CERTIQUALITY
CERTIFIED MANAGEMENT SYSTEMS

MANUFACTURING SITE
Via C. Chiesa, 30
20010 Pogliano M.se (MI) ITALY
T. + 39 02 93 55 90 06
F. +39 02 93 55 90 07

elgaeurope@pec.it
R.E.A. Milano n. 861433
Reg. Imp. di Milano n. 154339
C.F. /P.IVA 01857060154
Cap. Soc. € 3.014.026,00 I.V.

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