

Topics of the month: **How does the preparation step make an impact on plates?**

=Facts=

To optimize the production quality, preparation steps, which means “Handling unexposed plate” and “Preparation of negative film” and “Daily Production Check”, are quite important. A single error in one of the steps can affect the results. That’s why we need to pay attention to these steps.

=Related Information=

1. Handling of unexposed plate

- 1) In case of stored below 10 degree Celsius, AFP must be kept at room temperature before use.
- 2) Only peel off the cover sheet immediately before giving the face exposure. This will prevent any accidents such as “bending”, “Wrinkles” and “Dusts”.
- 3) Don’t incur wrinkles on the plate surface. Such wrinkles will diffuse the UV rays during the face exposure time.
- 4) The ideal cutting tool is a flat-bed operated guillotine, which a large table and sharp blade. Slant guillotine must not be used.
- 5) The plate will be laid flat on the table with the cover sheet side facing down. The blade must first penetrate the base film, the polymer, and finally the cover sheet. (The blade must be regularly cleaned and lubricated.)
- 6) The AFP plate can also be cut by hand using a sharp knife with ruler, in the same way. But it must be always done from the Base film side with great care.

2. Preparation of negative film

As the plate will exactly copy the negative film, it is a must to have a film with a perfect quality (each defect on the film can be copied on the plate).

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1) Type of negative film

Matt lith with high silver image density is the most recommended type of the films for AFP plate making. The main reason for using these types of films is that they allow the best vacuuming between plate and film, which is a key point to ensure a good copy.

2) Density

The light transmission through the negative film is a major condition to produce good plates. Recommended density value is as follows:

Transparent areas	0.04 maximum
Black areas	4.00 minimum

3) Emulsion side

The basic principle in flexo plate making is always to place the emulsion side of the negative film in contact with polymer. This will ensure the optimal reproduction, because there will be no light diffraction through the polyester of the negative film.

4) Opaquing

If a film requires retouching, opaquing has to be applied on the emulsion side of the negative film. It minimizes the prevents to a blot of vacuum sheet.

3. Daily Production Check

A regular (daily) check of the plate making equipment must be done, before starting production, to obtain an optimal plate quality.

Please follow accurately this daily production check, referring the attached check sheet.

Check list

	Item	Remark
1	Switch ventilation ON	-
2	Switch all units ON	-
3	Give preheating	10 minutes of preheating to - Exposure unit - Post exposure (UVA) unit - Light finisher (UVC) unit
4	Check exposure lamps	Visual check
5	Check post exposure (UVA) / light finishing (UVC) lamps	Please pay attention to the light finishing (UVC). It is extremely dangerous for eyes and skin (risk of heavy burns).
6	Check wash out bath quality & solvent saturation	-
7	Check wash out bath temperature	Conform to values given by the supplier.
8	Check dryer temperature	60 degrees Celsius
9	Clean exposure frame	-
10	Clean vacuum sheet	-