

# TRAINING MANUAL



**@flexo<sup>®</sup> Bag system**

for  
**Liquid**  
photopolymer  
plate making



**FLEXO TECHNOLOGY INC.**  
7 Wu Chuan 1st Rd. RM 816  
Hsin Chuang Taipei Taiwan  
[www.flexobag.us](http://www.flexobag.us)  
[flexobag555@gmail.com](mailto:flexobag555@gmail.com)

# Summary

## Introduction

General information.....	3
<b>@flexoBag</b> plate structure.....	4
<b>Basic of @flexoBag</b> processing.....	5

## Chapter 1

<b>@flexoBag</b> plate making process.....	7
Basic <b>@flexoBag</b> handling.....	9
Test.....	10
First step (washout and exposure).....	11
Main Exposure test.....	12
Washout depth chart.....	13
Production process.....	14
Exposure process.....	15
Wash out process / Drying / Post exposure + Water exposure.....	16
Quality control of <b>@flexoBag</b> plate.....	17
How to judge the plate results.....	18

## Chapter 2

Negatives.....	20
<i>What is a negative film</i> Technical specifications.....	21
Specification.....	22
Printing elongation.....	23
Artwork.....	25
<i>The dots</i> .....	26
Screen angle for color printing.....	28
Dot gain principles.....	29

## Chapter 3

<b>@flexoBag</b> Storage.....	32
Daily production check list.....	33
Plate making check list.....	34
<i>Trouble shootings</i> .....	35
<i>Investigation process</i> .....	36
<i>Press room troubles</i> .....	40

## Appendix

<b>@flexoBag</b> test chart.....	41
Platemaking data.....	42
Production records.....	43

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Hsin Chuang, Taipei, Taiwan  
(Wugu Industrial Park)  
flexobag555@gmail.com  
www.flexobag.us

**FLEXO TECHNOLOGY INC.**

# ECONOMIC AND YOUR HEALTHY LIFE ARE OUR MAJOR CONCERNS

*@flexoBag liquid plate making system is invented for economic and environment friendly, please conform to the following suggestions carefully.*



Always conform to operation safety and health, as well as concerning handling, usage and water draining.



Do not eat or smoke when plate making. Always wash hands after plate making and before eating.



Protect your eyes from UV lights during plate making.



Only prepare water do not have to use any solvent.



Whenever cleaning, maintaining or repairing, always remove main power plug.

# 1. General information

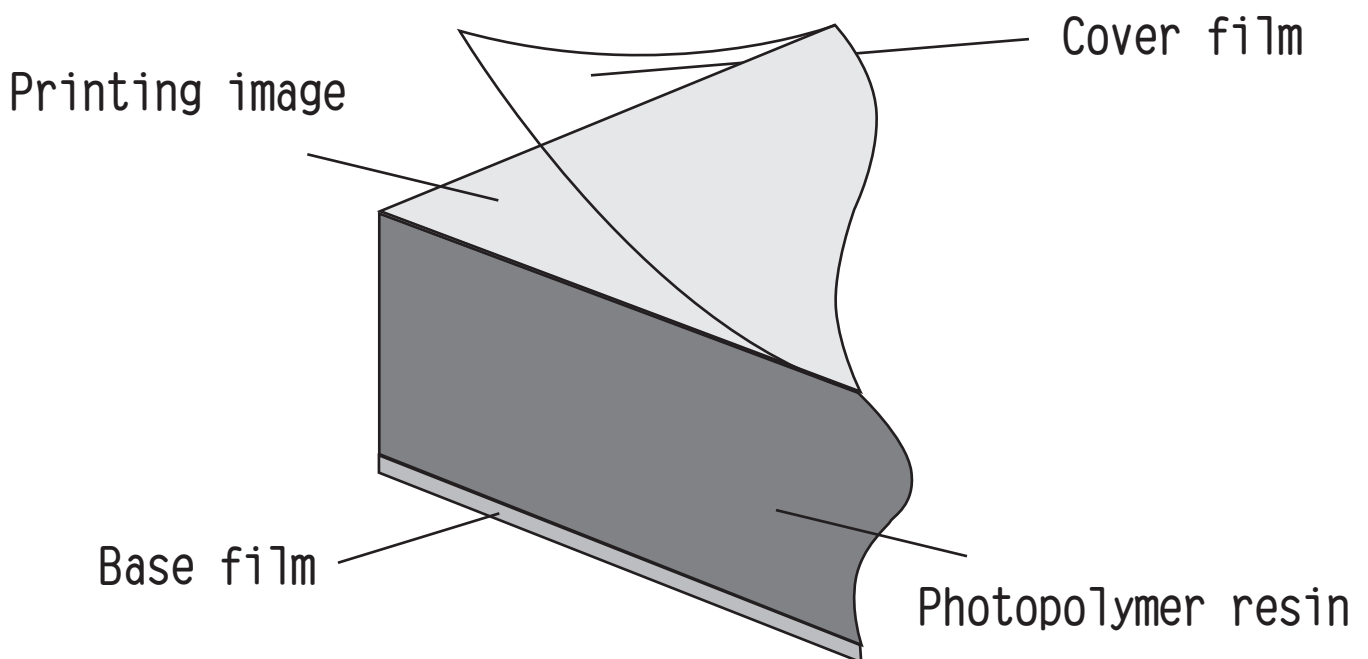
The purpose of this training manual is to give proper information about @flexoBag plate making system. This will introduce you how to make a good plate for printing as well as how to check the good plate and how to do trouble shooting.

**@flexoBag** plate making system is good for paper, paper bag and corrugated board printing. In addition to this innovative and unique plate making method, the whole process result is the same as it is processed by any conventional photopolymer plates.

# @flexoBag plate structure

@flexoBag plate is composed of:

- **Cover film**  
Cover film will act as upper side of the bag and will be torn off before washout procedure.
- **Photopolymer resin**  
Exposed image will be hardened, unexposed part will be washed, thus will become the major part of @flexoBag plate for printing.
- **Base film**  
A thicker polyester base film will bond the resin staying firmly together to keep the plate size stable for good registration during printing.



# Basic of @flexoBag processing

## *The principle*

Basic principle of @flexoBag plate is to perform a relief printing plate.

The usual plate making procedure is composed of 4 major steps ;

- ***Exposure***

Photopolymer resin reacts to UV light and change chemical structure during exposure.

Exposed areas are hardened so can be washed by water.

Unexposed areas will be washed by water.

- ***Washout***

Washout procedure will dissolve and remove unhardened part of plate to form the plate relief.

- ***Drying***

A drying is required after washout in order to remove the water residues on a plate.

- ***Post exposure + Water exposure***

Post exposure is to harden the unexposed and unwashed part of the plate.

Water exposure is a final procedure to do anti-tack treatment of a plate.

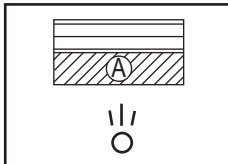


# Chapter 1



# I. @flexoBag plate making process

## Process procedures:

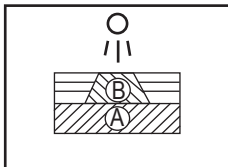


### 1. **Exposure**

The exposure step will harden the printing image part from a negative film.

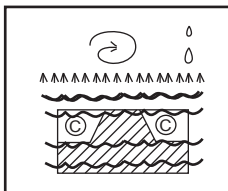
#### 1.1 Back exposure

This is meant to expose the bag from back side (lower lamps) to decide the plate depth you want in order to support the plate.



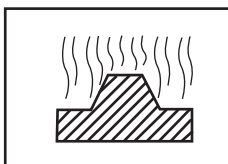
#### 1.2 Main exposure

To expose a printing image from negative film and will bind with the floor of back exposure to form a firm imaged plate for long impression printing.



### 2. **Washout**

After exposure, the plate is in two structures: hardened and unhardened areas, have to washout out with water to form the hardened printing areas and to wash off the unhardened areas as floor of a plate. In case of @flexoBag system, it is only use water to washout the plate.



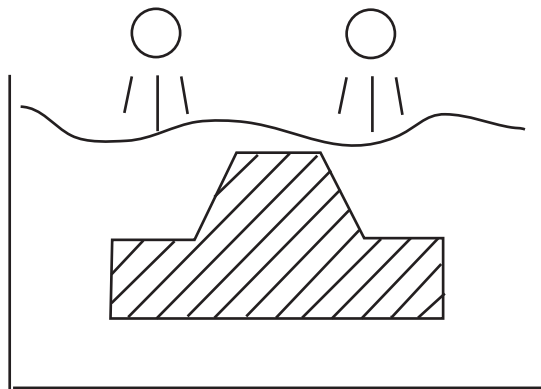
### 3. **Drying**

After washout, it is necessary to dry immediately of the plate in order to take off water residues on the plate. (Please use hot air at 60 degree C and to dry it for 20-30 minutes)

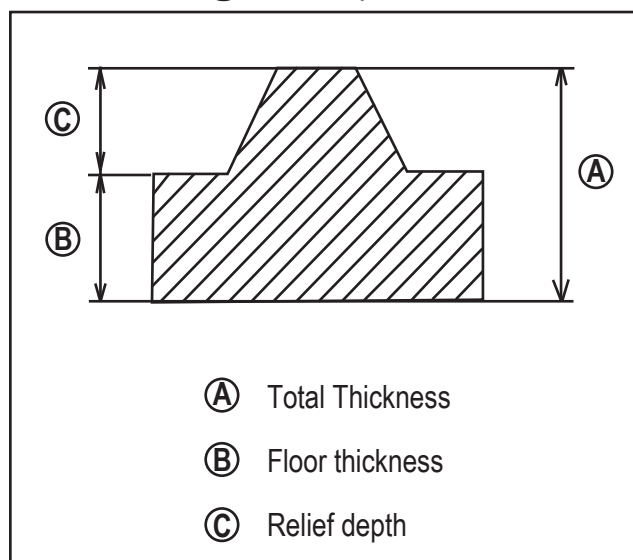
## 4. Post exposure + Water exposure

Post exposure is to harden the unexposed and unwashed part of the plate.

Water exposure is a final procedure to do anti-tack treatment of a plate.



### @flexoBag finished plate structure



## **II Basic @flexoBag handling**

### ***The unexposed bag***

Keep the resin in the original tank or wrapped in a black plastic film.

To prevent bending the bag or put on an unlevelled place.

Bended bag will cause wrinkle and leaving marks on the plate.

Pay attention to avoid sunlight or any other UV light.

### ***Exposed plate***

Suggest to put a thick paper board under the Exposed bag to support firmly

### ***Washout wet plate***

Do not touch any resin.

Or it will damage the printing surface or leaving marks on the plate.

Do not touch the polymer while it is not dry

(Not conforming to this recommendation can result in  
damaged printing image and / or ugly marks on the plate floor layer)

### ***Finished plate***

Must to prevent sun light or other UV lights.

Any more UV light will change the characters of the plate.