

Plate Set-up Formula for AVantage[®] Liquid Polymers

All photopolymer resins, including the AVantage[®] line of liquid polymers, shrink slightly when exposed and cured during the plate-making process.

To adjust for this and set the proper shim pack, the resin shrinkage rate must be accounted for in the set-up. Factors to be considered include, first and foremost, the desired target plate thickness. Next, the film thickness used to make the printing plate needs to be considered.

There are many different types of film being used to produce printing plates. There is the old standard silver film available in 4 mil and 7 mil thicknesses. AVSTAR printed film sold by Anderson & Vreeland is available in 5.5 mil and 8 mil film bases. The system uses a piece of cover film to protect the negative and seal it to the lower glass. The cover film generally has a 1 mil thickness.

The following equation will help you set the shim pack to make the desired plate requirements using AVantage[®] resins:

$$\text{Plate Thickness} + \text{coverfilm} + \text{2\% of Plate Thickness} + \text{Negative Thickness} = \text{Shim Height}$$

Examples:

- 67 mil + 1 + 1.5 + 4 mil silver = 73 mil
- 67 mil + 1 + 1.5 + 5.5 printed film = 75 mil
- 250 mil + 1 + 5 + 7 mil silver = 263 mil
- 250 mil + 1 + 5 + 8 mil printed film = 264 mil

Note: Plate exposure times will be different for silver film and printed film because printed film has a UV coated layer to generate the density needed with the ink coating. This prevents the UV from coming through the dark black areas of the negative.