

LITHOSTAR Violet

Lithostar Violet is a positive working, offset aluminum plate, especially designed for exposure in platesetters with Violet laser diodes. The light sensitive layer is coated onto an aluminum base. Silver diffusion transfer generates the image. A press ready offset plate is obtained after exposure, development and finishing.

The **Lithostar Violet** material consists of 4 different layers coated onto an aluminum base. During exposure the light penetrates the nuclei layer and strikes the silver halide emulsion layer underneath, where the latent image is formed. The emulsion layer also contains the developer agents. An alkaline developer is used to start the development:

- The Silver halides which have been exposed turns black and the non-exposed silver halides diffuse into the nuclei layer where they are fixed to form and ink receptive silver printing image.
- The plate then passes through a wash section while stopping development and washes off the non-image area of the plate.
- After the non-image area has been washed the plate is rinsed and finished. This gives the plate its lithographic qualities.

Spectral Sensitivity	Visible Violet
Useable Wavelength	Violet laser diode (400 - 410nm) energy 26mj/m2
Base	Aluminum
Thickness	.008 and .012
Run Length	up to 250,000 impressions (under normal press conditions)
Resolution	250 lpi, 2-98%
Inks	All conventional offset inks
Fountain Solutions	Most sheetfed and web press fountains.
Corrections	Deletions and additions available
Reprints	After proper gumming
Processors	Qualified Lithostar processors
Development	L5000 developer L5300 finisher
Replenishment	L5000 developer and L5300 finisher
Packaging	Daylight loading and Bulk
Storage	Prior to processing: 24 months after date of manufacturing when stored below 20 degrees C After processing: 48 hours after development and finished with L5300. If longer is required. Apply preservative gum and protect from high humidity.
Safelight	EncapSulite V50

Exposure Settings

Setting the laser intensity is extremely important because it directly influences the behavior of the plate on the press.

- Overexposure gives a weak silver image and a loss of calibration, resulting in low run length.
- Underexposure gives a gray silvery background, resulting in toning and loss of calibration.
- Correct exposure gives a dark silver image on a gray (aluminum) background, resulting in maximum run length, good in-water balance and consistent calibration.

Determining Exposure

Two methods can be used to determine the intensity level with which to expose Lithostar Violet plate for optimum plate performance

1 - Using the platesetters built in test target, (a series of screen tints at many different exposure levels). Expose and consequently develop, a plate containing this series of tints, and visually inspect, with a loupe to determine the range of exposure setting that apparently results in a geometrically correct 50% dot.

2 – With an Expodi-wedge, expose a series on the plate at different exposure settings.

Set the exposure intensity so that the density of the 2x2-pixel area is identical to the density of the 3x3, 4x4, and the 8x8-pixel area. This can be done visually or by means of a densitometer. At this exposure a 50% screen is also exactly 50% on the plate with a linear imagesetter.

Plate Development

Lithostar Violet is developed in a dedicated Lithostar processor (LP82, 32 in. or LP150, 59 in.) with L5000b developer, L5300b finisher and water.

Plate Correction

Because Lithostar Violet plates are exposed digitally in an platesetter, plate corrections is not common, cut lines and dust spots will not exist on the plate. When necessary, image deletions and additions are still possible after the plate has been processed.

Image Deletion. The Lithostar Violet Deletion pen contains a fluid that dissolves the silver deposits on the plate. The pen can be used in one of 2 ways:

- On a dry plate. This is the best method as the image is clearly visible. Apply let stand and wipe off with fountain solution.
- On press, after removing the ink with plate cleaner. Apply let stand and wipe off with fountain solution.

Image Addition. Additions can be use in the following 2 ways:

- On a dry plate, by gently applying the fluid or pen where image is wanted.
- On the press, parts to be corrected have to be cleaned first with plate cleaner. Then apply the correction fluid or pen and let dry.

Fountain Solutions

There are many types of fountain solutions, which work equally well with Lithostar as with the conventional metal plates

Inks

Most offset inks are suitable for use with Lithostar Violet plate material. Some ink will run better than others will, (same as with conventional metal plates

L5000 Developer	F9P43
L5300 Finisher	LHXN7
Correction Pen	
Addition Pen	