

**Topics of the month: UV lamps****=Facts=**

Two types of UV lamp are used for the exposure of the flexo plate: UV-A lamps, with a central wavelength of around 370nm, and UV-C lamps with a central wavelength of around 250nm. UV-A lamps are employed for back exposure, face exposure, and post exposure, while the UV-C lamps are used for detacking.

**=Tips=****1. UV-A lamps: service life & replacement**

Generally speaking, it is recommended that the UV-A lamps used for back/face exposure be replaced after about 500 hours of use. This is because if they are used for longer, lighting intensity begins to vary widely between lamps and it is no longer possible to ensure uniform exposure.

By the same token, if the UV-A lamps start flicking or turn black on the ends, they should be replaced even if used less than 500 hours.

If you have been using UV-A lamps exclusively for post exposure, you should replace them after about 1,000 hours. Post exposure has no direct effect on image formation, so illumination uniformity is not a priority.

Note that it is acceptable to remove a main exposure UV-A lamp that has been running for 500 hours and use it instead for post exposure. It should then be replaced when total usage reaches 1,000 hours.

Whether you are replacing or exchanging lamps, it is essential that all the lamps are replaced/exchanged at the same time. If you attempt to use old and new lamps together, the result will be uneven lighting intensity and this in turn will negatively affect plate quality.

## 2. UV-C lamps: service life, replacement

The UV-C lamps used for detacking exposure should also be replaced after about 1,000 hours. This is because if they are used for longer, lighting intensity begins to vary widely between lamps and it is no longer possible to ensure uniform exposure.

Also, when changing UV-C lamps, it is essential that all the lamps be replaced at the same time. If you attempt to use old and new lamps together, the result will be uneven lighting intensity and this will negatively affect plate quality.

## 3. UV-A lamps: wavelength

Certain types of UV-A lamp have a different central wavelength. Please tell your vendor that they are to be used for exposing flexo plates; alternatively, check that the product has a central wavelength of around 370nm.

## 4. Related advice

- 1) To ensure stable plate quality, it is important to pay attention to the following points, in addition to monitoring the total number of hours of lamp usage.

Each day, before making the first exposure ensure that the lamps are lit for at least 5 minutes to allow them to warm up. In this way you can avoid fluctuations in lighting intensity resulting in non-uniform plate reproduction.

If a vacuum sheet is contaminated, be sure to replace it with a new one. Replacement is recommended if UV blocking efficiency drops below 70%. Even if only part of a sheet is dirty, it is best to replace it.

- 2) Avoid looking directly at either UV-A or UV-C lamps when they are lit. The ultraviolet light will seriously damage your eyes. You should wear UV protective eyewear when measuring the strength of these light sources. Also, to protect your skin, you should wear gloves and long sleeved shirt.