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Kodak Miraclon DS94C and Toyobo Printight KM73GR Plate Comparison Dr Dianne Longley - October October 27, 2020.

Report on Miraclon DS94C and Printight KM95GR photopolymer plates

Karen O'Meara, Sales Coordinator from Avflex Australia, Silverwater, NSW sent me a sample of Printight KM95GR plate, which is the replacement plate for their previous supply of Kodak Miraclon DS94C photopolymer plate.

I have tested the replacement plate, doing the same film image on both plates, with similar plate exposure, processing and inking and printing at Agave Print Studio.

Image: A two-plate image created from drawings collaged together in Adobe Photoshop. The files were printed on an Epson 3800 onto Agfa CopyJet film. The files had K readings from 100-0%.

Plates: Two plates 21 x 15cms were cut using a safety ruler and Olfa knife from the Miraclon DS94C and Printight KM95GR plates as well as test strips 10.5 x 3cm from A6 Miraclon DS94C and Printight KM95GR plates.

Exposure unit:

A florescent lamp UV unit with a vacuum and diffusion film was used for the exposures on the test strips and later on the A5 plates.

After testing and printing, exposures were ascertained for both types of plates.

The Indian red and black Miraclon DS94C plates were exposed for 23 seconds (film positive) and 5 seconds (random dot screen).

The Indian red Printight KM95GR plate was exposed for 23 seconds (film positive) and 8 seconds (random dot screen). The black Printight plate was exposed for 25 seconds (film positive) and 8 seconds (random dot screen).

A Printight KM95GR was exposed for 25 seconds in the same UV exposure unit. A 21-step Stouffer Wedge yielded a reading of 7 with a 25 second exposure. This indicates the intensity of the UV unit I used.

Plate processing:

After exposure, the A5 plates were washed out in a tray of tap water 21-23°C for approximately 2 minutes. They were dried for 10 minutes, then post-exposed for 20 minutes.

Plate printing:

The plates were printed on an Enjay etching press. Graphic Chemical Process Black and Indian red inks were used. Both inks had some Graphic Chemical Easy Wipe added to the ink. Rives BFK 280gsm off-white printmaking paper.



Bottom left to right: Miraclon DS94C test strips. Black plate 30 and 25 seconds film and no RDS, 23 seconds film and 5 seconds RDS, and Indian Red plate 23 seconds film and 5 seconds RDS. There was washed out areas in the blacks on the single exposures so a double exposure solved this problem.



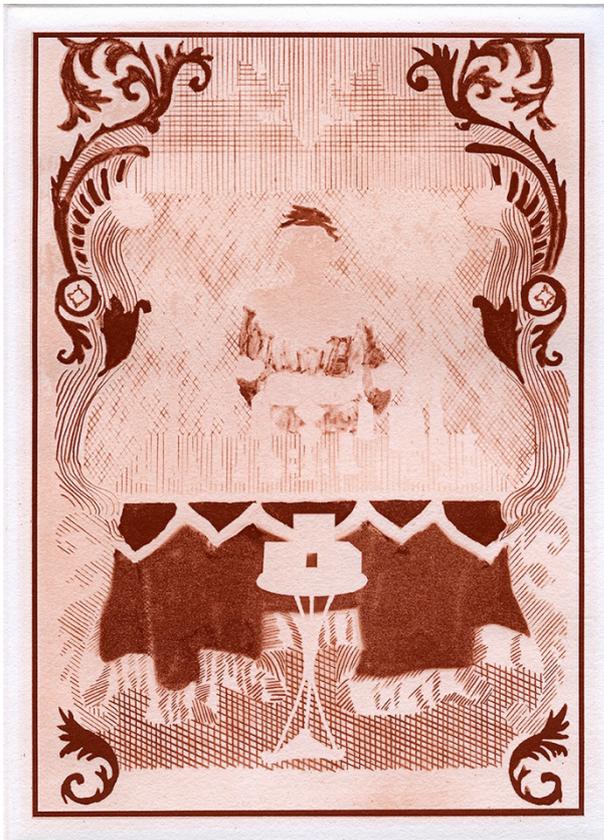
Top left to right: Printight KM95GR test strips. Black plate 30 and 25 seconds film and no RDS, 23 seconds film and 8 seconds RDS, 25 film and 8 RDS, and Indian Red plate 23 seconds film and 8 seconds RDS. There was washed out areas in the blacks on the single exposures so a double exposure solved this problem.



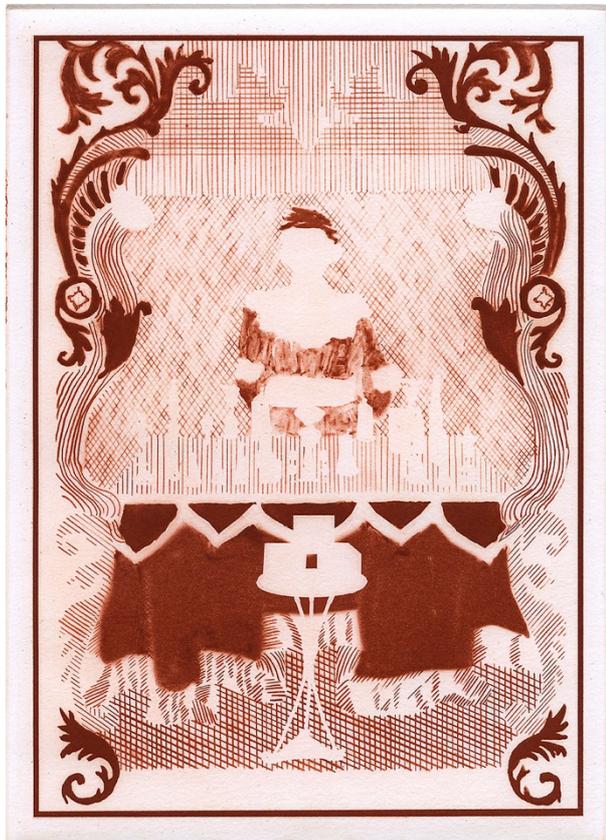
Miraclon DS94C black plate, 23 seconds film and 5 seconds RDS. Note plate tone on Miraclon plate. Line quality is very clean and different drawing media such as pencils and fine ink pens are evidenced in the print.



Printight KM95GR black plate, 25 seconds film and 8 seconds RDS. Note less plate tone on the Printight plate. Line quality is very clean and different drawing media such as pencils and fine ink pens are evidenced in the print.



Miraclon DS94C Indian red plate, 23 seconds film and 5 seconds RDS. Note plate tone on Miraclon plate. Good textural detail, and pencil line work.



Printight KM95GR Indian red plate, 23 seconds film and 8 seconds RDS. Note less plate tone on the Printight plate. Good textural detail, and pencil line work.



Miraclon DS94C double plate
Plate tone from both plates when printed together decreases the contrast of the image. Some people like plate tone, for others it can lose clarity in the lighter tones of the image. There is good detail in the linework and good tonal range.



Printight KM95GR double plate
Printight plate wipes very clean.

There is good detail in the linework and good tonal range.

Conclusions

It is an advantage that if moving from Miraclon DS94C to Printight KM95GR plate for intaglio images, there is not a lot of difference in the plate processing. Both plates can be cut successfully by hand using a safety ruler and Olfa knife. They are exposed for a similar time, and the plate processing is exactly the same. I used the same drying times and post-exposure times. An advantage of the Printight KM95GR plate is that it changes colour from a golden-green colour to a silver-blue when post-exposed (hardened) adequately.

I have used the Miraclon DS94C plate for many years, but I have no hesitation in using the Printight KM95GR plate for similar hand-drawn or inkjet film positives.

I will also test the Printight KM95GR for making embossing and letterpress plates. Photographers have been using the Printight plates for sometime for polymergravure prints due to the tonal range of the plates. The Miraclon plates have been an excellent all-purpose plate for intaglio drawn images, embossing and letterpress plates.

If you would like further information on this test process and the results I gained you can email me on dianne@diannelongley.com.au

Dianne Longley

Published 'Printmaking with Photopolymer Plates' in 1998, and is now researching and writing a new book on photopolymer printmaking for artists. Dianne operates Agave Print Studio in rural Victoria, Australia. An emphasis on safer printmaking techniques: workshops, tuition, collaborations, editioning, residencies and accommodation.