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White Paper

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Kodak's Press Ready Technology in **Kodak Sonora XP** and **Sonora News** Process Free Plates

It is Kodak's press ready technology that enables **Kodak Sonora XP** Process Free Plates (for commercial and offset packaging applications) and **Sonora News** Process Free Plates (for newspaper applications) to bypass processing and have the un-imaged plate coating removed as part of the press startup sequence. An improved version of the develop-on-press technology used by over 1,500 **Kodak Thermal Direct Non** Process Plate users, press ready technology uses the basic principles, mechanics, and components of lithographic printing to clean out the plate.

With **Sonora** Plates, in almost all cases, a printer's current press setups, sequences, inks, fountain solutions, and blankets can be used successfully. Press ready technology also works with integrated and non integrated, conventional and continuous dampening systems and for printers with automatic startup sequences. It all happens seamlessly as part of the regular press startup.

The Basic Principle:

During the startup of the press, the absorption of the fountain solution prepares the un-imaged coating to be physically removed by the tack and shear of the ink. This enables a successful transfer of the coating from the plate to the blanket, and the coating is then carried out of the press by the substrate.

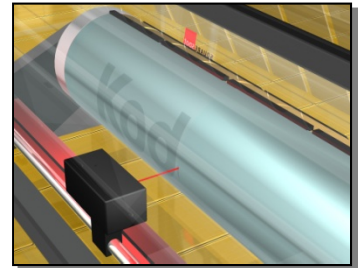
Here's how it works step by step:

Sonora Plates are negative (write the image) plates. They are non ablative and do not require a debris removal system, offering a clean, safe environment for imaging plates. Certain "chemistry free" plates do require a debris removal system.

Sonora Plates have an imaging sensitivity of 150 mJ/cm² on **Kodak** Platesetters with **SQUAREspot** Imaging Technology and 175 mJ/cm² on **Kodak Achieve** Platesetters, enabling excellent throughput capabilities. Laser energy requirements may be different on other certified CTP systems.

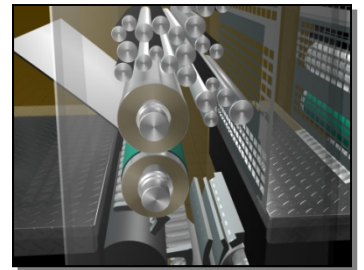
Step 1: Imaging *Kodak Sonora* Plates

- During the imaging of the plate, the thermal laser writes the image, cross-linking the polymer resin to create a hardened, robust image area.



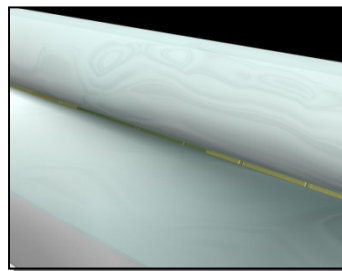
Step 2: Mounting *Kodak Sonora* Plates

- The plate is then mounted on the press cylinder like any other offset plate.
- **Sonora** Plates can work with either manual or auto load systems. No special physical handling is required, but exposure to white and yellow light must be limited.
- Image contrast is distinct enough to read 10 pt. type for cylinder identification.



Step 3 - 4: Engaging the Dampening Rollers and Ink Rollers

- The fountain and ink rollers are engaged, covering the entire plate with fountain solution and ink.
- The fountain solution prepares the coating of the non-image area to be physically removed.
- The tack and shear of the ink transfers the un-imaged coating to the blanket.



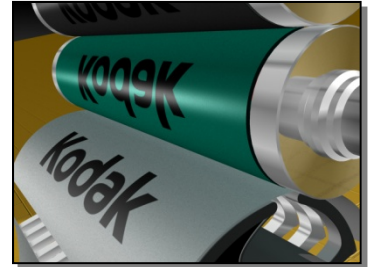
Step 5: Coating Migration to the Blanket

- Through a purely physical interaction, the un-imaged coating is removed from the plate and transferred to the blanket.
- This is a physical, rather than a chemical process, ensuring a very wide latitude for press chemistry and press setup conditions, and eliminating the variability associated with traditional wet processing systems.



Step 6: Engaging Impressions

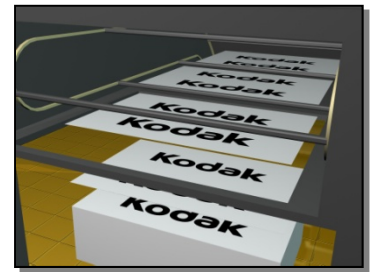
Lastly, the paper feed is engaged, and the coating is transferred from the blanket to the substrate and carried away with no contamination to the ink and fountain trains. Typically, within several sheets (or newspaper copies) the background is clean. Registration and colour are adjusted like with any other plate.



Step 7: Printing starts

At this point, the plate behaves like any other thermal plate.

- As with any plate, run lengths can be dependent on the press type and printing conditions, but typical run lengths for **Sonora XP Plates** are as follows:
 - o Up to 200,000 impressions – commercial heatset and coldset web
 - o Up to 100,000 impressions – commercial sheetfed
 - o Up to 50,000 impressions – offset packaging applications
 - o Up to 10,000 impressions – UV
- **Sonora XP Plates** offer strong screening capabilities of 1 to 99% at 200 lpi and 20-micron stochastic screening (dependent on capability of imaging device).
- Typical run lengths for **Sonora News Plates** are as follows:
 - o Up to 200,000 impressions – typical coldset web
 - o 50,000 to 75,000 impressions – direct litho
 - o Up to 25,000 impressions – UV
- **Sonora News Plates** offer screening capabilities of 3 to 97% at 150 lpi and 36-micron stochastic screening (dependent on capability of imaging device).



More information on **Sonora** Plates can be found at www.kodak.com/go/sonora.

About Kodak

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