

Using Kentucky Shine



INTRODUCTION:

Kentucky Shine Press Applied Overprint Varnishes; also known as ink unit coatings, are water-based products formulated as an alternative to typical water-based coatings. Conventional water-based coatings are applied using a special coating unit at the end of a sheetfed litho press. Since Kentucky Shine Press Applied Overprints are applied using the last printing unit of a sheetfed or heatset litho press, an expensive coating unit is not required to obtain the same desired results.

KENTUCKY SHINE ADVANTAGES:

- Kentucky Shine is applied using the last printing unit on a sheetfed or heatset litho press with the dampener turned off eliminating the need for expensive coating equipment.
- Excellent for printers who would like to take advantage of all the capabilities of aqueous coatings without having to spend the money for a coater.
- Performs well on a wide variety of sheetfed and heatset litho presses.
- Can be applied in-line over wet inks with very fast set speed or off-line over properly formulated dry inks.
- Available in high gloss, matte finishes and primers.
- Can be cleaned up with ammonia-based detergents and household cleaners.
- More stable on press than most competitive products.
- Dries quickly and requires less spray powder than oil-based overprint varnishes.
- Non-yellowing, excellent rub resistance and does not crack when folded.

PRESSROOM INSTRUCTIONS - PREPARATION AND RUNNING:

Following the procedures and precautions below when planning to use Kentucky Shine is critical to successful use.

TAKE DAMPENING ROLLERS OFF THE PLATE. DO NOT USE FOUNTAIN SOLUTION.

USE VERY LOW PRESSURE SETTINGS FOR ROLLERS, BLANKET AND PRINTING PLATE (STANDARD VARNISH PLATE).

CLEAN ROLLERS WITH REGULAR PRESS AND ROLLER WASH TO REMOVE ANY RESIDUAL OIL-BASED INK OR OVERPRINT VARNISH. **DO NOT** USE FOR CLEANING KY SHINE.

FURTHER CLEAN AND CONDITION ROLLERS WITH KS-702 BLANKET AND ROLLER SPRAY.

DO NOT POUR KENTUCKY SHINE INTO FOUNTAIN UNTIL JOB IS REGISTERED AND READY TO RUN.

WIPE BLANKET AND PLATE WITH KS-702 BLANKET AND ROLLER SPRAY JUST PRIOR TO USING KENTUCKY SHINE.

DO NOT USE INKS CONTAINING REFLEX BLUE (ALKALI BLUE), RHODAMINE, METHYL VIOLET, FLUORESCENT AND OTHER ALKALI-SENSITIVE PIGMENTS. OTHER RED PIGMENTS SUCH AS LITHOL RUBINE, LITHOLS AND 2B REDS MAY BE SENSITIVE TO ALKALI. **DISCUSS WITH INK SUPPLIER.**

DO NOT STOP PRESS FOR MORE THAN A FEW MINUTES UNLESS YOU INTEND TO CLEAN BLANKET AND PLATE WITH KS-702 BLANKET AND ROLLER SPRAY.

CLEAN ENTIRE UNIT IF PRESS IS GOING TO BE DOWN FOR AN EXTENDED PERIOD OF TIME.

MONITOR KENTUCKY SHINE UNIT WHILE RUNNING TO OBSERVE ANY DRYING ON ENDS OF ROLLERS. LIGHTLY SPRAY KS-702 BLANKET AND ROLLER SPRAY ONTO ROLLERS AS NEEDED.

BLANKET AND PLATE INFORMATION:

Blanket packing should be one centimeter narrower than the blanket size to avoid varnish build-up, slinging and paper curl. A normal plate can be used. Kentucky Shine does not lithograph, so dampening rollers should **NOT** be engaged..

Special methods have been developed for those printers that require pattern application of Kentucky Shine Press Applied Overprint Varnishes. A cut blanket or photopolymer flexographic plate mounted to the blanket cylinder are two methods successfully being used.

CUT BLANKETS:

By carefully cutting a blanket down to the backing and peeling away the rubber layer, pattern application can be achieved. There are two methods that can be employed, dependent on the desired end result.

For simple dropouts or glue flaps, the area to be removed can be outlined with a marker. By carefully cutting the lines with a hand held razor knife and a steel rule, one can achieve fairly good results. This method requires some planning for registration and proper fit.

More complicated designs will require a more precise method. Folding carton printers must cut and score cartons. They use a computer driven CAD-CAM drawing machine to prepare a vinyl overlay to register cuts and scores to the printed sheet. By replacing the pen/marker in the drawing stylus with a cutting blade (EXACTO razor blade), a blanket can be accurately and quickly cut to prescribed depth. Unwanted surface is peeled away and the blanket is ready for use.

PHOTOPOLYMER FLEXPOLYMER PRINTING PLATES:

Photopolymer plates, like blankets, will be mounted with metal clamps. Plates tend to stretch or elongate when tightened on the cylinder but is predictable. An initial "fingerprinting" allows compensation for stretching to be built into the process. Two different types of plate material have successfully been used;

DuPont CL4 is available in sizes up to 50" X 60" in .045 inch thickness. Because of the thickness, a CL4 plate can only be mounted on the blanket cylinder. The composition does not tolerate hydrocarbon solvents (press wash) very well.

Polyfibron FLAL is available in sizes up to 55" X 60" and .035 inch thickness for larger presses. The thinner .035 inch plate can be mounted on many lithographic press plate cylinders. In addition, the FLAL is very tolerant of hydrocarbon solvents.

Contacting plate suppliers for additional information is recommended.

CUT BLANKETS VERSUS PHOTOPOLYMER PLATES?

Cutting blankets is probably more popular and less expensive than photopolymer plates. Regardless, both options deliver overprint varnish in a predictable and consistent manner.

CLEANING AND PREPARING TO USE KENTUCKY SHINE:

With a little effort, the press can be properly cleaned and conditioned.

- 1) It is very important to clean the entire unit with normal press cleaning materials. If the unit previously had color in it, extra effort will be required to ensure it is very clean.
- 2) Spray KS-702 Blanket and Roller Spray lightly on rollers and let press idle for a few minutes. This will serve the dual function of conditioning rollers to receive Kentucky Shine and provide additional cleaning. The alkaline nature of KS-702 will help remove any colorants that remain from the first clean-up. Remove the excess with a cloth dampened with KS-702.
- 3) Spray a cloth lightly with KS-702 and wipe blanket and plate to clean and condition.

INK INFORMATION:

As a precaution, always evaluate new pigments and ink formulations with overprint that will be used.

Use inks that are formulated with polyethylene wax. Waxes or slip additives like silicone, PTFE or microcrystalline wax may cause problems such as crawling, pin holing, or uncontrolled migration through the varnish.

Do not use inks containing pigments that may bleed or change color when coming into contact with an aqueous alkaline overprint varnish. The pigments that exhibit this alkali sensitivity include:

-Alkali Blue (Reflex) -YS Rhodamine -BS Rhodamine -Red Lake C -Fluorescents -Methyl Violet

START UP:

Once ready to print, pour Kentucky Shine into fountain. Open keys or lengthen sweep to apply a little more overprint than normal settings with a conventional oleoresinous overprint. Lightly spray blanket with KS-702 and start printing. Once press is running, coating weight can be reduced to achieve desired results.

Kentucky Shine is more stable than other competitive products, however, it still sets and dries a lot faster than conventional overprints. During start-up, a low coating weight may exaggerate set speed and result in a tacky blanket.

SHEETFED DRYING CONDITION RECOMMENDATIONS:

Best results on a sheetfed press are achieved by providing a sufficient volume of warm air directed onto the varnished surface. Use a minimum of IR heat to assist drying. **Exercise care to avoid load temperatures in excess of 90°F.** If sheets are too hot, they may stick together in the load.

WHILE RUNNING:

Monitor rollers while running. If it appears the overprint is starting to tack up or dry on rollers, lightly spray KS-702 Blanket and Roller Spray on rollers as needed. Take care to avoid spraying too much on rollers. **EXCESSIVE USE OF KS-702 MAY SLOW DRYING OF KENTUCKY SHINE OVERPRINT.**

If the press is going to be stopped for a period of time longer than a few minutes, clean blanket and plate with KS-702. This minimizes Kentucky Shine drying on blankets and plates which may cause delivery and application problems. If possible, idle the press during downtime and spray KS-702 lightly on rollers as needed to keep drying to a minimum. By following these precautions, the press will continue to run well when printing is resumed.

CLEANING THE PRESS:

While the overprint is wet, it can easily be cleaned with mild detergents and water. For dried areas, KS-702 can be sprayed on the surface to solubilize/rewet the overprint. Follow with the detergent/water mixture. **DO NOT ALLOW OVERPRINT TO DRY ON PRESS.**

WORKING WITH THE FINISHED SHEETS:

Sheets that are overprinted with Kentucky Shine can dry in about 10-20 minutes after application. Some papers and inks may require more time or spray powder to minimize blocking conditions. Proper drying is dependent on film thickness, temperature and humidity. Excessive ink film thickness must be taken into consideration as well.

ADDITIONAL INFORMATION:

Kentucky Shine is a water-based material and subject to loss of evaporative materials in the overprint. KS-702 is formulated to replenish these materials on press. Please take every precaution to keep containers covered when not in use.

Kentucky Shine is a non-catalyzed water/glycol overprint. Gloss versions are not as high in gloss as typical UV coatings or catalyzed coatings.

Additional Tips and Precautions When Running Heatset Kentucky Shine Overprints

- 1) Ensure printer understands the procedure for using Kentucky Shine Press Applied Overprints. For example, ensuring dampening unit is NOT engaged.
- 2) Ensure printer understands web temperature must be adjusted to provide adequate drying. There may be a different type of visible plume exiting the stack due to the use of glycol versus conventional ink oil.
- 3) Ensure printer is aware extremely high press speeds may contribute to misting around the printing unit.

- 4) Contains a very substantial slip/wax package. As a result, addition of a silicon solution to the web before the folder may not be necessary.
- 5) If the printing unit has recently been used for ink, a more thorough cleaning will be required. For example, applying a liberal amount of Kentucky Shine to rollers and idling will actually clean some imbedded color from pores of rollers. A good cleaning afterwards with KS-702 will provide additional cleaning.
- 6) **DO NOT USE SILICONE/WATER SOLUTION UNLESS ABSOLUTELY NECESSARY. THIS CAN CONTRIBUTE TO BLOCKING AND STICKING AFTER JOB IS PRINTED.**

There is some trial and error required to determine the best combination of press and oven settings when first using Kentucky Shine. Multiple combinations may be necessary when various inks and substrates are part of the standard operation. Overall, printers are quite pleased with the performance of Heatset Kentucky Shine when they understand the performance properties and how to successfully use the product. Heatset Kentucky Shine provides less yellowing, a coating-like feel and smooth appearance on the finished sheet.



FOR YOUR PROTECTION:

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