

# Specifying press coatings

## MOHAWK

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Press coatings are used to create visual effects and to seal inks and prevent rub-off. Three different press coatings are used in commercial sheetfed printing: varnish, aqueous coating, and ultra-violet coating (UV). All three are available in matte, dull or satin, and gloss formulations. It is essential to understand the characteristics of your paper when specifying a coating. Uncoated papers are absorbent, so coatings perform differently than on coated papers.

### **Varnish**

Varnish is a petroleum-based sealant applied by a standard inking unit in the press. It is the most economical coating. Varnish is available in matte, dull or gloss and can be applied on the entire press sheet or in selected areas. Varnish is applied on the last unit (inline), or as a second pass (drytrap), to seal the offset inks and provide rub protection.

On coated papers, varnish provides a difference of sheen where it is applied. For instance, a gloss varnish on a dull coated stock will make the paper look glossy. In this case, varnishes are often specified only on the printed image, called a spot varnish, so that photographs look very glossy on the matte surface.

On uncoated papers, varnishes are widely used for rub protection. They will not provide a visual effect, no matter what kind or how many layers of varnish are applied. However varnishes will darken ink colors—making solid blacks even blacker.

Always use a matte or dull varnish on uncoated papers. A gloss varnish has a greater likelihood of appearing uneven, or mottled, accentuating the natural highs and lows of the paper.

Varnishes can yellow paper over time. Varnishes can also be tinted with pigments to provide very light and transparent colors for text and graphics.

Varnishes are the most flexible coating. They may be used on any weight stock and be applied over ink without fear of bleeding. For projects that require gluing (envelopes, pocket folders, book covers), please check with the bindery whether it is necessary to knockout (not use) the varnish where the glue is going to be applied.

### **Aqueous coating**

Aqueous coating is a water-based sealant applied by an inking unit of the press or a special coater tower. Aqueous coating is available in matte, dull, satin, and gloss and provides better rub protection than varnish. Printers prefer using aqueous coating which dries immediately allowing for quicker back-ups.

continued

### **COATINGS RECOMMENDED FOR MOHAWK PAPERS**

#### **INXWELL PAPERS NAVAJO AND OPTIONS**

Matte varnish or aqueous  
Dull varnish or aqueous  
Pre-test UV

#### **SMOOTH UNCOATED**

Matte varnish or aqueous  
Dull varnish or aqueous  
Satin varnish or aqueous  
Pre-test UV

#### **TEXTURED UNCOATED**

Matte varnish or aqueous  
Dull varnish or aqueous

#### **OPAQUE**

Matte varnish or aqueous  
Dull varnish or aqueous  
Satin varnish or aqueous  
Pre-test UV

#### **COATED**

Matte varnish or aqueous  
Dull varnish or aqueous  
Satin varnish or aqueous  
Gloss varnish or aqueous  
UV

The visual effect of aqueous coating will be the same as varnish on both coated and uncoated papers. Again, only specify matte or dull aqueous on uncoated papers, as gloss may mottle. Aqueous coatings are typically used to cover the entire press sheet. Spot aqueous coating is available although it requires expensive blankets. However, aqueous coating is clear and should not yellow the paper so specifying a spot aqueous may not be necessary.

Since aqueous coating is water-based, some printers will only use it on 100 lb. text and heavier papers to avoid the potential of the paper curling on the edges (as it absorbs the water). The volume of the aqueous coating can be adjusted on press to maximize the paper performance.

Unlike varnish, certain pigments may bleed with aqueous coating. The ink supplier may be able to provide alternative for problematic pigments. For projects that require gluing (envelopes, pocket folders, book covers), please check with the bindery whether it is necessary to knockout (not use) the varnish where the glue is going to be applied.

**Ultra-violet coating**

Ultra-violet coating is a highly reactive, cross-linking system in which the vehicle is dried by exposure to UV radiation. UV varnish is applied inline on a UV press; UV coating is applied by silkscreen, offline. It provides the best rub protection but also is the most expensive of all the coatings.

UV is available in matte, dull, satin and gloss, although gloss is usually all that is specified. UV coating/varnish is glossier than all of the other coatings—UV applied by silkscreen provides the ultimate gloss. UV is used on a full range of coated papers. 80 text and heavier weights of paper can be UV coated, however, cover weights are preferred. UV can be used on smooth, uncoated papers. Pre-testing is highly recommended as the paper will need to be sealed before the UV is applied—which can be cost prohibitive.

UV can be easily specified as spot or overall coverage. This coating application can deepen the color of the printed area. Drying is virtually instantaneous when exposed to the correct level of UV light so projects can move quickly into the bindery. Like the other coatings, consult the bindery for projects requiring gluing.

For more information and samples, please call your local merchant or Mohawk at 1 800 the mill. [www.mohawkpaper.com](http://www.mohawkpaper.com)