

Anilox care



Anilox cleaning

If Anilox rolls are not maintained regularly they are not able to operate to optimum efficiency. Cells that are not cleaned often become clogged or plugged therefore do not allow the maximum release of ink onto the printing plate.

There are different systems on the market for cleaning these cells of dried ink or coating: Chemical wash, baking soda blast, ultrasonic cleaning.

Any method used to clean the engraved coating must penetrate the depth of the microscopic cells in the hard ceramic coating and give the roll a long life.

As a standard practice, rolls should be cleaned while on press with a 0.003" (75 microns)-bristle stainless-steel brush. After manual cleaning, engravings should be viewed under high-power magnification to ensure they are clean. If the cells are not plugged with ink, they should not be cleaned with off-press systems.

One way to reduce the need for secondary cleaning is to use anilox which are engraved to the optimum depth-to-opening ratio (30%). This will contribute greatly to easier cleaning, due to the open-bowl-shaped cell design.

The key to wear prevention is lubrication: Always pump enough ink through an ink system to keep both the top and bottom blades "wet," or lubricated. Running Anilox rolls dry will destroy them. Remember to keep ink viscosity as high as possible, as this generally provides more lubrication as well as improved print quality

Quality doctor blades

The second most-common cause of anilox damage is the lack of knowledge about the integral components in the press, and not ensuring that these components are of good quality. The inks, the doctor blade, the end seal and the plate are four process components that come in constant contact with the anilox roll, with two of them—the doctor blades and the end-seals—easily capable of destroying the anilox roll if they don't work in tandem with one another.

It is imperative to remember that not all steel is equal, and some blades wear out quicker than others. It is the tensile strength of the steel, sometimes referred to as "micro particles," which determines the strength of the blade. The more tensile strength or micro particles, the longer the blade will last, since less material is shaved off and circulated through the inking system. Inferior doctor blade material can produce score lines on the anilox roll, and once the score line becomes visible, it is a clear sign that the grinding of the doctor blade fragments has flattened the cell walls in the circumferential area— rendering the roll useless.

Anilox Protective covers



Anilox rolls should always have protective covers on when not in the press. Too many things can happen in the pressroom to cause a scratch on the anilox surface. The resulting damage will show up in the printed product, and the roll will have to be repaired or discarded.

Incidental damage can occur from many sources including crane hooks, the ink pan, contact with other rolls, or nails and debris in the crate. Just by wrapping the anilox in a protective cover this can be avoided.

Anilox roll storage



Proper storage is vital to preventing damage. So either build proper storage racks or purchase them from the anilox suppliers themselves.

Before storing a roll, the face and journals should be cleaned. The face should be dry and some form of protective cover should be applied. Extruded plastic covers, for example, are very inexpensive and provide terrific impact resistance. After the face is covered, a lightweight lubricant such as WD 40 should be applied with a rag to the journals. This will reduce rusting and corrosion.