



Ceramic Anilox Rolls

The anilox roll is an integral part of the flexographic printing press. Anilox rolls in simple terms are nothing more than a medium for carrying a precise amount of ink to the printing plates. The anilox roll consists of the steel or aluminum base, a stainless steel barrier (corrosion resistant) coating is applied to this. Next the ceramic layer is applied over the "Barrier Coat". Utilizing a laser, microscopic cells in the form of hexagons are burned into the ceramic surface. By controlling the laser various screen counts as well as volumes can be achieved. Ceramic anilox rolls were developed to improve on the old mechanically engraved chrome plated rolls that did not last long. Ceramic anilox rolls (if properly cared for) will last on the average 5 times longer than the old chrome roll technology. The information that follows represents a few simple practices that will help in gaining the most out of a ceramic roller.

Care and Handling of Anilox Rolls

Roll Arrival

- When a new roll arrives, inspect the crate to ensure there is no physical damage to the outside (loose boards, broken boards, etc.). If there is damage to the crate notify the carrier to establish responsibility.
- Remove the roll from the shipping container and remove protective wrap.
- Inspect the roll for damage such as scratches, dings, or dents which may affect print quality.

On The Press

- Care should be taken when handling anilox rolls. Never rest the roll or sleeve on its surface, this can damage the engraved surface and cause defects in print. If possible support roll from journals.
- When loading an anilox roller into the press, if possible cover the roll body with a roll wrap, foam covering, or fluted card board to protect the engraved surface from being damaged by impact against a hard surface such as the machine frame. Chipped ceramic on the dead band areas of the roll can eventually lead to inks and solvent leaching under the ceramic. This will reduce the life of the roll as well as cause the doctor blades to chatter.
- Once the anilox roll is loaded into the press never run the roll dry with the ink chamber loaded against the roll, this will cause excessive wear to the doctor blades as well as score the anilox roll.
- When ink is in the chambers keep the roll running so the cells do not become plugged with dry ink.

Cleaning

- Clean the anilox rolls in the press immediately upon stopping the ink flow and roll rotation. Flush the chamber as usual and then use a stainless bristle brush (in a circular motion) along with an approved cleaner.
- Wipe both sides of the doctor blades. Dry ink from the doctor blades can wedge between the blades and the anilox and cause print problems as well as damage the anilox roll (score lines around the anilox).
- Do not use cleaners that are too caustic or acidic. Chemicals with pH level of less than 5.0 or higher than 12.0 can cause delamination of the ceramic from the roll base.
- When using a soda blast, plastic media, or similar cleaning system wipe the rolls down after cleaning. The soda used to clean the rolls can cause damage to bearings and other precision machine parts if they are exposed to it.