



Narrow Web Flexible Packaging Converting

Background

The purpose of this bulletin is to address frequently asked questions from narrow-web converters who are currently printing pressure-sensitive labels and are looking to expand into the flexible packaging market. This bulletin will address specific information around converting pouch materials on press, as well as technical information regarding the form-fill-seal pouching (FFS) process.

Paper-Faced Pouch Materials

These pre-laminated materials are designed to be surface printed and are typically used to package dry goods in flexible packaging. Paper structures are a good introduction product for narrow web converters, as all pouches are surface printed.

Tensions

Due to the thickness and material make up of the pre-laminated paper pouch materials, standard unwind and rewind tensions used for converting pressure-sensitive materials will work well.

Printing & Varnishing

The paper face on the pouch materials are all semi-gloss flexible packaging paper. Line copy as well as process printing can be achieved. However, flexible packaging requires special inks.

Avery Dennison has seen the following ink systems work well for flexible packaging. We recommend you talk to your current supplier, for ink recommendations for flexible packaging.

Inks that have worked well are:

- Zeller Gmelin's Series 34
- Actega's WIT Inks
- Actega's VesaFilm Ink System
- Wycoff's Advanced Film Series
- Alden and Ott's Tempo Grip

The pouching of these materials expose the printed surface to temperatures up to 375°F. Inks and varnishes need to be able to withstand these temperatures. Contact your ink supplier to verify the fit for use.

Many pouches are used for food packaging. Varnishes for the food market need to meet the end-use Food and Drug Administration (FDA) requirements.

These materials are wound in rolls off press with the print surface coming into contact with the sealant material. Inks and varnishes need to be properly cured to avoid damaging the sealability of the material. The odor of the cured inks and varnishes also needs to be considered as the odor can transfer to the sealant film, and ultimately into the finished pouch. An FDA water-based varnish will effectively seal the inks from transferring to the seal area.

Avery Dennison has seen the following varnish systems work well for flexible packaging. We recommend you talk to your current supplier, and communicate you are working in the flexible packaging market. Your current supplier can recommend varnishes for this process.

Varnishes that have worked well are:

- Actega's Radcure Systems
- Actega's RVG001212
- Sun Chemical's QMKSV0484934
- Alden and Ott's Flex Pack Varnish

Finishing

The printed roll off press goes through a FFS machine for forming, die-cutting and filling to create the final pouch. The finished roll contains the front and back of the printed pouch – often produced with many up across the web.

End Use Applications

- **PPFP (paper/poly/foil/poly)** – Lightweight packages such as dry powders and mixes featuring easy tear open and long shelf life due to foil barrier.
- **PPFP w/Surlyn®** – Same as above but with a greater ability to seal through light powder contamination in the seal area.
- **PPMOPP (paper/poly/metallized polypropylene)** – For applications requiring additional package stiffness and puncture resistance such as noodles or rice. Notch needed to open pouch is added during the FFS process. PPMOPP has less barrier and shorter shelf life than PPFP due to metallized BOPP versus foil sealant and 35# PPMOPP is used for improved puncture resistance for noodles and large granulated spice packs. MOPP provides a good moisture barrier.