

APRIL 2022

# BAMBERGER POLYMERS TECH TIPS

## Part Decorating

### Decorating Techniques

Often a part requires the application of accent trim, product labels, logos, end-user directions, warning labels, recycling codes, and a vast array of additional needs. In most instances these decorations are applied through a single pass or series of secondary decoration techniques to complete the desired look and appearance.

For the discussion today we will highlight four common secondary manufacturing operations involved in part decorations.

- Pad printing
- Silk screen printing
- Hot stamping
- Laser etching

## Decorating Continued

**PAD PRINTING** - Is an indirect gravure process wherein a silicone rubber pad is used to transfer an inked image from an engraved plate, known as a "cliche," to a part. Pad printing (one or more colors) can be applied to flat, cylindrical, or even odd-shaped plastic parts. Lightly textured plastic parts, as well as parts exhibiting some sink marks have been successfully printed.

**SILK SCREENING** - In the silk screening process a selectively permeable screen is used to deposit the inked image onto the plastic part. A relatively inexpensive process, silk screening yields a high quality print image. Registration, in the transfer of intricate designs, however, can present a problem. For that reason, silk screened images are usually limited to two colors.

**HOT STAMPING** - In the hot stamping process, wood grained, pigmented, or metallic designs are sandwiched between special coatings on a release carrier strip or tape. The designs are then transferred to the surface of the part via a heated stamping die, which is first pressed against the tape, then against the part.

**LASER ETCHING** - Is a process that uses a laser engraving machine to remove material from the surface of an object, leaving a marking in the shape of either a textual or graphical design. When the laser contacts the surface of the material, the high heat of the laser causes the surface material to melt. The melted material expands and leaves a slightly raised mark on the surface.

