

# Converting Tips for Platinum Thermal® Film

## Background

Platinum Thermal film is designed to enable VI functionality through a traditional TT/DT printer but offer superior stability in outdoor lighting conditions. In other words, it gives TT-like outdoor capability without the ribbon. It is compatible with various ink systems including UV and water-based and is ideal for both indoor and outdoor applications. It can be used for pressure-sensitive labels, tickets and point-of-sale applications and is ideal for both indoor and outdoor applications, where chemical or water resistance is required. Testing to ensure suitability for end use applications is recommended.

## Press

Your press should be in good working condition and capable of converting films. Ensure the press and all in-line components, like automatic unwind and rewind stations, are properly grounded to control static and nip rollers should be functional to properly control web tension. Keep web tension as low as possible, while still maintaining print registration. Unwind and rewind tension should be 1 pli or lower. Always examine the entire web path for frozen idler rollers and ink/adhesive buildup.

- > Only use inks approved for use in Direct Thermal (DT) applications per ink supplier
- > Always test ink and media in end use printer for proper functionality prior to launch
- > Always ensure proper ink drying and/or cure is obtained. At times, proper performance under the thermal printhead is not obtained immediately after press printing due to “post-cure.” If poor imaging is observed, test again after two to three weeks.
- > Use of Corona treater is recommended for proper ink coverage and adhesion
- > Checking ink anchorage by tape pull will likely also remove top layer/skin of silver media
- > Take care when removing outer layers off press roll when loading and unloading as knife slabs can transfer marks deep into other layers of the roll

## Thermal Imaging

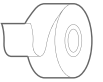
This is a DT film that images without the use of thermal chemistry, and while VI images are obtained by using a traditional direct thermal imaging device (without the use of a thermal transfer ribbon), thermal darkness may vary depending on printer model and printer output conditions. Therefore it is recommended to test the media for acceptable imaging in all new applications. Expect the material to convert and perform comparable to a cavitated BOPP film.

- > Film offers exceptional stability under high heat (121C or 250F) and direct sunlight for thermal imaging film
- > Best results using print speeds ranging from 2ips to 4ips
- > Take care to evaluate the scuff resistance, delamination and thermal imaging needs of your application to ensure the media performance is acceptable
- > Color gradation of the films backside does not impact the print performance
- > Talk to your Avery Dennison representative to find an adhesive that works best for your application, especially with removable adhesives

## Tooling

Ensure you follow best practices for cleaning and wear on tooling dies to avoid adhesive buildup and dust. Consult with your die manufacturer for design recommendations. Some options suggested include: a staggered die cavity configuration, wider bearers, and slightly bowed leading and trailing label edges. These design options help reduce heat buildup. Work with your equipment supplier to verify the suitability of any existing magnetic cylinders and anvils for DT Silver. Use dies that have been specifically designed for the facestock and liner combination you are converting. A hardening process is usually recommended to extend die life.

- > Die bearers and bearings must be well lubricated at the start of every job and maintained throughout the run to keep the die cool
- > Bearer wipers should be oiled (avoid over saturation) and free of debris or buildup. Worn wipers must be replaced



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- > Vortex compressed air coolers are useful in reducing excessive heat buildup on bearers, but avoid nozzle placement that inhibits flow of lubrication or blows lubricant off of the bearer
- > Use of razor knives for trimming, after matrix stripping, provides the cleanest edge. If using scoring knives, make certain they are sharp, clean and spin freely.

## Finishing

Rewind and slit rolls immediately after printing to reduce the impact of web tension and heat from the press. Finished rolls should be loose enough to allow for easy, fluid motion near the core when pushing on the side of the roll. Rolls should be protected from damage, abrasion, bumping and/or scuffing.

- > Knives should be clean and sharp to prevent the edge of the finished web from being nicked
- > Rewind tension should start between 0.5 and 1.0 pli for die cut labels, with tension gradually decreasing from the start to the end of the roll
- > Do not use rewinding tables or slitting equipment without taper tension capability

### Statement of Practical Use

All pressure-sensitive materials should be tested thoroughly under end-use conditions to ensure they meet the requirements of the specific application.

### Warranty

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