

Converting Tips for Tamperfas™ and CopyCode™ Tamperfas™ Vinyls

Fasson® Tamperfas™ destructible vinyl products have been specifically designed to meet the demanding requirements of the tamper-evident market. To achieve the destructible end-use performance requirements, some sacrifices in converting/ handling were necessary. It is critical to understand the features and inherent limitations of these products to assure optimum processing and realistic expectations.

The key areas for consideration are inherent film shrinkage, storage/handling and on-press converting.

Shrinkage

The destructible properties of this film are a result of its unique formula, which incorporates large amounts of filler pigments, and, unlike standard vinyls, relatively small amounts of plasticizers.

Due to this unique formulation, the film inherently shrinks more than standard vinyls. Shrinkage up to 2% may be routinely experienced. In a pressure-sensitive construction, this degree of shrinkage may result in adhesive remaining along the edges of the liner (edge ooze) and, over time may bond so tightly as to cause converting difficulties such as edge tearing.

Storage and Handling

Time and temperature affect the extent of shrinkage. Using Tamperfas™ products as quickly as possible (FIFO inventory methods) is highly recommended. Converting and processing at the end user should be completed within a 6-month time frame. Proper storage conditions (70°F +/- 10°F / 50% RH +/- 10%) are essential. Tamperfas™ products are fragile by design. So edge nicks and gouges brought about by mishandling can render the material unusable for converting.

Converting

Butt Cut die cutting is the only method recommended – where the matrix between labels is left in the web. If the end-use label design is such that matrix removal is a must, tooling design and configuration are critical considerations for effective matrix stripping. For low tear strength products such as the Tamperfas™ vinyl, the waste strip-out matrix dimensions should be targeted at a 2:1 ratio – where the machine direction matrix is 2 times wider than the cross direction strip-out. Labels should have at least 1/8” radius corners. The matrix stripping angle should be as flat as possible – sometimes referred to as “dispensing the matrix”.

When converting difficulties are encountered due to shrinkage, it may be necessary to “re-slit” roll edges prior to die cutting and stripping. This can be accomplished by either of the following ways if the rolls can be unwound:

1. Underscore the liner using an adjust-a-score or die tooled to cut through the liner from the bottom to the face, prior to matrix stripping. This allows the edge portion of the liner to travel up with the face matrix.
2. Slit the unconverted stock offline, removing approximately 1/4” from each edge prior to press converting.

NOTE: The “re-slit” technique is recommended as standard practice. In either situation, the slit rolls should be purchased 1/2” wider than their finished order calls for. This will allow enough material for the edge slitting and/or underscoring operations.

The number of splices in a slit roll also influences converting efficiencies. The fragile nature of destructible vinyl leads to many atypical processing problems in manufacturing processes. Consequently, splices are more frequent relative to other standard roll film face stocks.

To better manage expectations in converting, splice specifications are as follows.
Maximum Number Splices per 1200 feet: 3
Maximum Number Splices per 5000 feet: 15
Minimum Distance between splices and the last splice to end of the roll: 75 Feet

Note: To figure number of splices for other roll lengths:

1. Divide slit roll length by 1200 feet
2. If the number is fractional, round down if less than half, round up if more than half.

Any questions should be directed to your Avery Dennison Sales Rep or Application Consultant. First-time users of Tamperfas™ should review benefits and limitations with Avery Dennison representatives.

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