Finat Test Method/Kiss Cut/FILMIC FTM 23b
The evaluation of backing damage or marking to the liner that may be caused due to kiss cutting via a die.

background
Label stock generally consists of face stock on a backing liner. Once the matrix has been stripped from the face stock the web integrity is maintained by the liner. If a misaligned die should cut into the liner excessively this could reduce the tensile strength of the web sufficiently to cause a web break. As such, damage in the transverse direction (TD) across the web can be more of an issue than in the machine direction (MD) along the web.

When placed under increasing tension most filmic materials will show elastic behaviour up to the yield point, after which they will deform irreversibly and eventually break. In labelling applications the tensions used will generally not be above the yield point and so if the liner can be tensioned to this point successfully without breakage then any die-strike impressions should not cause a problem.

For some materials, for example polyester films such as polyethylene terephthalate (PET), the yield point can be difficult to locate accurately.

In this case measurement of F5 (ensuring that the liner can be loaded to 5% strain) can be used as a substitute target.

Die-strike through filmic liners can be influenced by several parameters. We recommend to carefully check them in case of die-strike problems:
- the solidity and robustness of die-cutting unit;
- the tool diameter should be adjusted according to the width of the printing equipment;
- the tolerance between magnetic and anvil cylinder;
- the quality of the flexible die (weariness - height profile of the die);
- the consistency of the liner thickness;
- the temperature at which the die-cutting operation take place (influence of UV light on the film and adhesive softness);

In case of problems: Adjust the cutting angle to improve the die-cutting operation.
Verify the tension of the web (avoid too high tension).
Strip the matrix immediately after the die-cutting operation to avoid recovery of the adhesive between the die-cutting and the stripping steps. Cool down the laminate before die-cutting operation.

FINAT Test Method/Die strike for paper FTM 23a

This test method allows the converter to assess the degree and consistency of die strike and cutting during the conversion process.
The method can be used during press make ready to assess the condition and settings of cutters, to prevent label dispensing failures or web breaks during high speed dispensing. The test is applicable to paper based liners.

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