

Signcutting of Avery Dennison® films

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Introduction

Avery Dennison self-adhesive films can be cut successfully on a wide variety of computerised sign cutting equipment, both drum fed and flat bed plotters. Cutting different films often requires different settings on the plotter to obtain a satisfactory result. Generally, thicker films are less easy to cut than thinner films (less knife friction!). Reflective films generate more wear of the knife as it is dulled by the glass beads. Finding the optimum setting for a certain film will help you to cut it in the most efficient way. Please refer to the relevant Technical Data Sheet to select the correct product for any particular application.

Conditioning the material

If the conditions in the storage area are different to those in the workshop, we recommend leaving the rolls in the original packaging until the material is at the temperature of the air in the workshop. The best working conditions in a plotting room are 18-23 °C and 40-55 % R.H. Material left overnight in the workshop should not be subjected to temperatures lower than 13-15 °C. We recommend to wrap in a polyethylene sheet if it has to be stored overnight. Fluctuations in temperature and relative humidity should be avoided as much as possible.

Knife adjustment

On most plotters, the depth of the knife can be adjusted by means of a spring and/or weight. If the knife is set to cut too deep, it will cut through the liner that may cause the liner to split upon removal. If the knife is set too high, it will only cut through part of the adhesive layer causing difficulty when weeding the waste. The knife is adjusted correctly if the blade just touches the liner, leaving a barely visible line. Always use a sharp knife: cutting with a dull blade results in serrated edges and, if cut at high speed, it may cause the knife to jump.

Generally, we do not recommend the use of knife blades that have been resharpened, as a different knife angle may change cutting performance. As the calliper of the films as well as the composition may vary, each material may require a specific adjustment of the knife blade: check before you start.

Minimum text size

The minimum size at which a text can be successfully cut depends on a number of variables, including typestyle, knife sharpness and depth adjustment, cutting speed, flatbed or drum plotter, temperature, type and caliper of film, etc. etc.

Any converter should satisfy himself that the required text height can be cut on the plotter beforehand. Adjustment of the knife speed or depth can occasionally help when cutting smaller texts.

Plotter table/drum

The plotter table or drum surface should be absolutely flat and free of damage or scores. Any irregularity on the surface of the table or drum can cause the knife to cut through the liner.

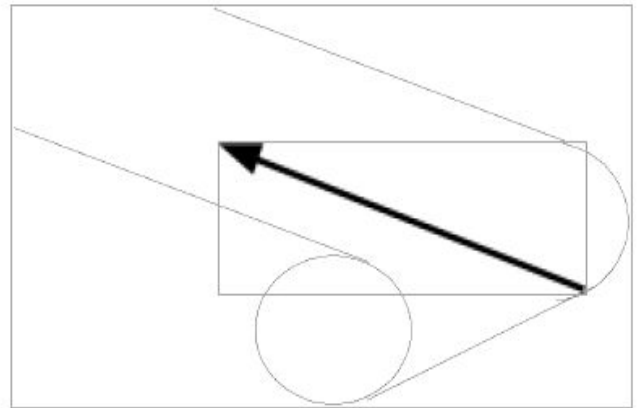
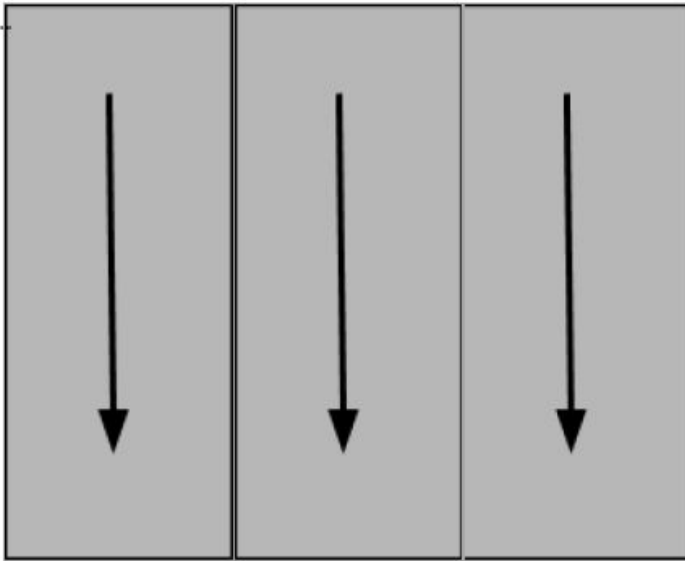
We recommend to regularly check the flatness of the surface of the drum or plotter table.

Weeding/stripping

As soon as the material has been cut, excess film should be removed (stripped). This will prevent possible adhesive flow, after which the weeding operation becomes more difficult and time consuming. Weeding a text is best done from right to left of the text that was cut. Complicated designs or typestyles should be stripped slowly to avoid accidental removal of the design that was cut.

Application of metallic matte serie films:

Application of metallic, matt Signcutting Film follows the same instructions as above. However, metallic, matte series have a directional surface finish, because of the particular way the film is produced. Therefore the appearance of the film might slightly change if observed from different angles (this effect is called: 'flop'). When applying metallic, matte Signcutting Film, it is very important that the unwind direction of the roll is consistently oriented into one direction during application and application orientation is kept the same between different pieces (see picture below).



With metallic, matt Signcutting Film, it is even more important that material should be used from the same batch number for one application.