GENERAL FORMULATIONS

TECHNICAL TIP

CUTTING THICKER MATERIALS

Creating dynamic and interesting shapes can be done with most any plotter or cutter. The key is to understand the tools that you have and the materials you are trying to cut. General Formulations has a variety of products that can be produced in this way. Our thicker products range from 6 mil vinyl to 15 mil vinyl and overlaminate combinations. We have listed some technical tips below that will help you achieve your goals.

GENERAL SETTINGS

1. Expose the blade correctly. On most knife holders, you only want to expose the blade a ½ turn or so (just enough to cut through the film[s]). Even if you decrease the force on the blade, sometimes exposing the tip too much can put too much pressure on it.
2. You may need to change blades more frequently due to the thickness (i.e. the wear on the blade).
3. Controlling the speed (may have to go slower to make sure the blade cuts through the material).
4. For materials 5 mil to 12 mil (especially polycarbonate and other thick laminates) a 60 degree blade is generally recommended. A 60 degree blade provides a sharper cutting edge and helps prevent edge lift.
5. Ensure you have a good cutting strip underneath the media. A worn strip can create variations in cutting depth.
6. Make sure the media is secure (using enough pinch wheels).
7. Use two passes/cuts or more on the graphic. Maxing out the blade depth and or force may not be the best way to go. It is very difficult to cut just to the liner with one pass cutting. It is recommended that you use as little pressure (force) as possible and as minimal bade extension as possible.
   (more passes with less force and depth = a better cut)
8. Make sure the offsets connect (full cut all the way around the graphic). Most plotters have adjustments on the units to correct for slight variations.
9. When in doubt, most plotters or printer/plotters have test patterns so that you can test this outside of a production run.

CUTTING FILMS LIKE GF 235/238 - 15 MIL MOTOMARK

ON NEWER UNITS (Like Roland VG-640):
Newer units have a feature in Versaworks called OVERLAP. This is designed for cutting multiple times along the same shape.

1. Bring in your print file (with cut lines) into VersaWorks.
2. Assign the correct profile.
3. Either in VersaWorks or on the printer, put your force around 165 grams (this is a general starting point, please refer to general cutting tips above for basic tips).
4. Set up the job for 3 cut passes.
5. Make sure you have a new 60 degree blade.
6. Expose your blade in the blade holder approximately 3 mil (credit card thickness) or match to the material being cut.

The idea is to cut JUST to the liner and leave a light impression. Ideally you will not see an impression on the reverse side of the liner (down side), if you do, the force or cutting depth is most likely too high.

ON OLDER UNITS (Like Roland SP's):
On units such as SP's, you will need to use this process, as the firmware of those units only allows cutting to be done in a certain way.

1. Return to Origin.
2. Send same job again.

How many times you need to send the job depends upon the following factors:

1. If you have the correct blade.
    a. A 60 degree blade is ideal.
    b. Using a 45 degree blade will create more drag (more blade face). You may have to do more passes with this style of blade.