

About this Helpful Hint

This "Helpful Hint" is intended to explain the advantages and disadvantages of using a roll type product in die cut applications.

Considerations

Always remember that our vinyl foams are manufactured as tape products with adhesive exposed. (See Standard Configuration of Foam).

Standard Configuration of Foam



Covering the exposed adhesive for die cutting purposes involves a process we call reverse wrapping (reverse unwinding) the material. This information will assist you in selecting the optimal product for your application. You can save money and head off potential defects, scrap, complaints and returns by carefully making your selection. Quoting the right product to meet your application is critical.

During the reverse wrap process what you are actually doing is changing the configuration of the material (see Altered Configuration of Foam). The material will appear to have the paper liner covering the adhesive, but what has actually taken place is that by reverse wrapping the material you have compressed the material onto the shorter, next wrap of liner inside. Also note that there is a loss in yield equal to the amount of paper removed (the circumference of the roll).

Altered Configuration of Foam

(Reverse Wrap)



leaving

Die Cut Facts

• <u>Processing the Material</u> – If you decide to reverse wrap tape grade manufactured material, you should consider buying (XR). XR is an easier foam release coating, which lowers the force necessary to break the foam-casting paper bond. This will allow you to unwind the log without stretching or tearing the foam since the foam to casting paper bond, created during the manufacturing process, is now less than the adhesive to paper bond.

• <u>Dimensional Gain</u> – If you decide to reverse wrap the material, you need to consider the machine direction effect on the material versus the tolerances involved. Remember the loss in yield from material compression onto the inner layer will show up as gain on the die cut piece once the liner is removed. The pieces will grow because the foam is trying to recover to the original configuration. (Note: The die can be orientated so the largest dimension is cut in the cross machine direction to minimize this problem.).

• <u>Minimizing Loss</u> – The most cost effective way to minimize the losses listed above is by ordering the product most suited to your needs. On thinner products, we suggest purchasing longer rolls to reduce the percentage lost. (The length of the roll increases much more rapidly than the circumference). Another solution would be to order transfer wrapped products specially made for die cutting (such as V713). What transfer wrapped means is that we will laminate a new liner on the adhesive side of the material and remove the casting paper. This prevents loss of product yield during processing and dimensional change in the product after die cutting due to reverse wrapping.

• <u>Die Cutting vs. Kiss Cutting</u> – In the above suggestion (Minimizing Loss) the product referred to uses a brown, release paper (.006" thick) that we recommend for die cutting thicker products. However, if you're going to be kiss cutting (not cutting through the carrier) we recommend using our brown release board (.011 thick) (e.g. V717).

• <u>Purchase Price vs. Total Cost</u> – The product suggestions in Minimizing Loss and Die Cutting vs. Kiss Cutting require additional lead times and because of the additional operations and materials involved will also cost more per linear foot. However, buying standard tape grade product and changing the configuration (reverse wrap) will increase your piece price due to yield losses, which is why we recommend that for thicknesses over .188", you purchase die cut grade products with transferred release paper or board.



Reverse Wrap Loss Standard Logs & Master Logs



Reverse Wrap Loss Standard Logs & Master Logs



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