Flexible Packaging Solutions

Products

- Stand-Up Pouches
- Plain or Pre-printed
- Spout Pouches
- Side Gusseted
- Laminated Roll Stock

Film Type

- High Barrier (Foil, KPET, EVOH)
- High Strength (Nylon)
- Matte Finish (Natural Look)
- Biodegradable
- Recyclable
- Kraft

Services

- Bag Design (Size, Style & Barrier)
- Die Lines
- Artwork
- Rotogravure Printing (12 Color)
- Bag Samples & Prototypes
- Midwest & West Coast Shipping
- Standard Delivery: 8 Weeks
- Express Delivery: 5 Weeks

Let Us Help:

- Size your bag.
- Select the best Barrier Film.
- Provide a Die Line
- Provide Sample Bags.

Equipment Incentives

Buy our bags ➤ Save on Machine Cost!!
Call us for details

7641 Holland Road ● Taylor, MI 48180 ● 313.299.9600 ● www.dura-pack.com
Are You Flexible?

- Flexible Packaging uses 75% less plastic than their rigid counter parts.
- Packaging weight is reduced by 70% which means lower shipping costs.
- Empty Pouches occupy up to 95% less space.
- Flexible Pouches cost less.

Being Flexible Saves you Green and Makes you Green.

Understanding Film

Stand up pouches are typically made from 2 or more films laminated together. Films can be laminated by using an adhesive or by heat and pressure. One of the more common laminated structures is PET/Ink/LLDPE.

Here is what it means:

- PET or Polyester (or Mylar) is the outside layer. It provides strength and has a high melting point.
- Ink is the printing that occurs on the inside of the PET layer and will get sandwiched with the next layer of film.
- LLDPE or Poly is the inside layer. It provides a moisture barrier and has a low melting point. This is the layer that melts together to form the seal.

Film Thickness

A pouch is specified as being so many Mil thickness. A typical thickness ranges between 3 Mil and 5 Mil. A Mil is sometimes called a Thou and should not be confused with a millimeter (Metric).

- Mil (Thou) = .001 inch
- Gauge (ga) = .00001 inch = .01 Mil
- Micron(µ) = .00003937 inch = .03937 Mil

When describing the thickness of the individual film layers, a few different measurements are sometimes intermixed just to keep us on our toes.

- 48 ga PET / Ink / 115µ LLDPE

The outside layer (PET) is .48 Mil thick and the inside layer (LLDPE) is 4.5 mil thick for an overall bag thickness of 5 mil.

Breaking all the Barriers

It is the job of packaging to provide a sufficient barrier to Light (UV), Oxygen and Moisture. Packaging should contain the aroma of the product and prevent Oxygen and Moisture from passing through the bag for maximum shelf life.

The air we breathe is 20% Oxygen and 78% Nitrogen. Each film has an Oxygen Transfer Rate (OTR) which is the amount of Oxygen that passes through a defined area of film over a 24 hour period. The lower this number the better the barrier. Foil is the best at 0. Other good barriers are Saran coated Polyester (KPET), MPET and EVOH. To increase shelf life, Oxygen can be removed by purging with Nitrogen before sealing.

Film also has a Moisture Vapor Transfer Rate (MVTR). While LLDPE (Poly) is known as a “Screen Door” to Oxygen, it has a pretty good MVTR.

Barrier Characteristics

<table>
<thead>
<tr>
<th>Film</th>
<th>Description</th>
<th>OTR (cc/m²)*</th>
<th>MVTR (g/m²)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foil</td>
<td>Aluminum</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>EVOH</td>
<td>Ethylene Vinyl Alcohol</td>
<td>0.6</td>
<td>100</td>
</tr>
<tr>
<td>MPET</td>
<td>Metalized Polyester</td>
<td>0.95</td>
<td>1.2</td>
</tr>
<tr>
<td>KPET</td>
<td>Saran Coated PET</td>
<td>7.8</td>
<td>7.55</td>
</tr>
<tr>
<td>PET</td>
<td>Polyester</td>
<td>85</td>
<td>55</td>
</tr>
<tr>
<td>Nylon</td>
<td>Nylon</td>
<td>95</td>
<td>260</td>
</tr>
<tr>
<td>OPP</td>
<td>Polypropylene</td>
<td>2000</td>
<td>8</td>
</tr>
<tr>
<td>LLDPE</td>
<td>Polyethylene</td>
<td>2500</td>
<td>17</td>
</tr>
</tbody>
</table>

* Values vary based on thickness and manufacturer.

Recycle Codes

We’ve all seen the recycle codes on plastic packaging. This symbol refers to a Resin Code which is assigned to a particular plastic (Polymer). Most laminated pouches don’t display a Resin Code. The individual film layers that make up the laminated structure will have a code of 1 to 5, but once they are laminated, they become a 7 (Other).

Biodegradable

Most plastic films take several hundred years to decompose in a landfill. Scientists have discovered that by adding starch to Poly it will begin to decompose in months. While this sounds great, its uses are limited for food packaging since Poly isn’t a very good barrier and this film is designed to decompose when exposed to heat, moisture and light (UV). All of these exist in a landfill, but also, to some degree, in the supply path. Fluorescent lights on the store shelf and heat and humidity in shipping and warehousing all have to be controlled to maintain the integrity of the package.

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<table>
<thead>
<tr>
<th>Resin Code</th>
<th>Description</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET, PETE</td>
<td>Plastic bottles</td>
<td>(Water, Juice, Soda, Ketchup...) Oven Bags, Microwaveable food trays</td>
</tr>
<tr>
<td>HDPE</td>
<td>Non-food bottles</td>
<td>(Shampoo, Cleaners, Motor oil) Plastic Lumber, Flower Pots, Recycling bins...</td>
</tr>
<tr>
<td>PVC [Vinyl]</td>
<td>Shrink Wrap, Deli &amp; Meat Wrap, Pipe, Siding, Window Frames, Decking, Flooring...</td>
<td></td>
</tr>
<tr>
<td>LDPE</td>
<td>Bags (Bread, Produce, Garbage, Frozen Food...) Squeezable Bottles, Container Lids...</td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td>Containers (Yogurt, Margarine, Deli Foods...) Medicine Bottles, Bottle Caps, Carpeting...</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>Cups, Plates, Bowls, Meat Trays, CD Cases, Packing Peanuts, Insulation...</td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td>Reusable water bottles, Barrier Layers, Oven Baking Bags, Custom Packaging</td>
<td></td>
</tr>
</tbody>
</table>