4.3 Plastic Barrier Cups, Trays & VisyCorqs

Food Packaging provides its customers with plastic barrier cups, bowls and trays. (We also produce and sell extruded sheets to other packaging companies.)

The manufacturing process used is referred to as thermoforming.

We customise the sheet to match the requirements of the products end use. Whether it is for microwave use, extended shelf-life or placed into a freezer.

The properties of the extruded sheet depend on the number of layers in a sheet and the composition of each layer. We can manufacture sheet with up to eleven layers.

A brief overview of some of the plastics extruded by VisyPak, and their properties, is shown below.

	PP	Barrier PP	PET	PCR-PET	CPET	Barrier HIPS
Microwaveable	a	a			a	
Conventional Oven					a	
Translucent	a	a	a	a		a
Recycled Content	a	a	a	a	a	
Adaptable to multiple filling methods (hot and cold)	a	a	a	a	a	a
Freezer					a	
Extended Shelf Life		a				a
Variety of Colours Available	a	a	a	a	a	a

Extrusion Process (How we create plastic sheets)

Step 1

The raw material for extrusion is resin plus additives (such as impact modifier for CPET). The resin is loaded into a hopper. Depending on the properties of the resin, the moisture may need to be removed from the resin prior to being loaded to the extruder.

Step 2

The granules are fed from the hopper into the barrel of the extruder. Assisted by the heat in the barrel and the action of the screw the plastic melts as it makes its way along the barrel and exits the barrel to the feed block section in a molten liquid form.

Step 3

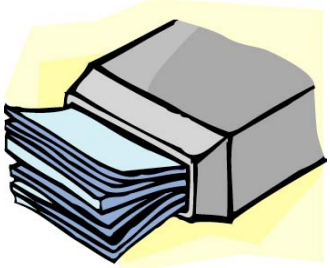
In the feed block other layers (like; adhesives, EVOH, PCR etc) is added together prior to going through the die.

Step 4

These layers flow through gates at the end of each extruder feeder. The layer may be added to the top of the main layer, the bottom of the main layer, or to both the top and bottom layer or even in the middle of the main layer (simply by opening or shutting the relevant gates).

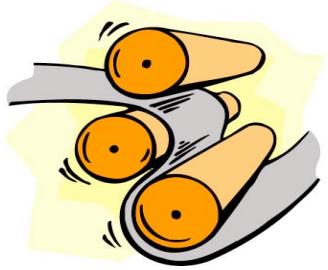
Each layer is progressively added in the same fashion as the tube of molten plastic moves toward the die.

From the feed block section the molten polymer moves toward the die. The die is set to achieve the gauge of the sheet required.



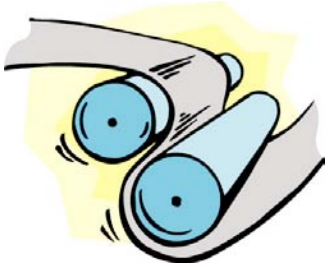
Step 5

The sheet then passes through rollers that finalise the gauge (width) of the sheet based on the distance between the rollers. The middle roller is heated to a higher temperature than the top and bottom rollers to dictate the path the plastic will take (the plastic will gravitate away from the chilled rollers).



Step 6

The sheet then passes through cooling rollers to remove the heat from the sheet and to slightly polish the sheet.



Step 7

The sheet is trimmed at the edges then wound into rolls for sale or further processing.