The purpose of this document is to present Palram’s definition of extrusion direction (ED) and assist in the proper purchasing of Palsun polycarbonate sheets with specific extrusion direction specifications.

There are currently many terms used in the plastics industry to describe the natural “grain” of extruded flat polycarbonate sheets. Some of these terms are listed below:

- Roll Wave
- Ripple
- Hash
- Chatter

The illustration below gives a clear explanation of the above terms and how they are oriented on an extruded polycarbonate sheet. All of the above terms appear perpendicular (transverse direction) to the direction in which the sheet is coming off of the extruder (machine direction).

If a customer requires the “grain” of the polycarbonate sheet to be visible in a certain direction, such as in a transportation application, they will need to specify by placing the order with the size in the following order:

Width (Transverse Direction) X Length (Machine Direction)

Extruded Sheet

Calendar Rolls

“Transverse Direction”
Dimension ________
Max. 104 in. (264 cm)

“Machine Direction”
Dimension ________
Dimension Limited to Transport Carrier’s Max. Length.

* Ripple Orientation is also sometimes referred to as “Roll Wave,” “Ripple,” “Hash,” or “Chatter.”