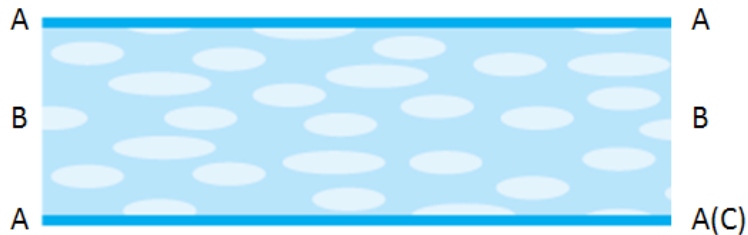


New Technologies for Coextruded Sheet

Individual Layer Foaming



Benefits of Foaming:

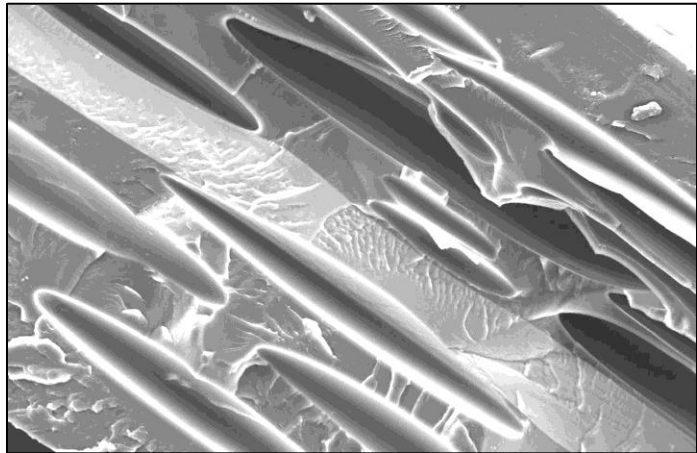
- Reduce weight
- Reduce resin consumption
- Reduce cost of production through resin savings
- Maintain rigidity



One or more layers of the sheet are foamed (for example, a 3-layer sheet where the inner layer is foamed and the outside layers are not to maintain their properties, such as sealing or gloss)

Average reduction without sacrificing rigidity is 20%. Significantly greater reduction (more than 50%) can be achieved depending on the application.

Macro supplies systems using chemical blowing agents (CBAs) and physical blowing agents (PBAs) [butane, inert gas (CO₂, N₂)].



SEM (scanning electron microscopy) image of a coextruded barrier sheet with two foamed layers (200x magnification)

New Technologies for Coextruded Sheet

Microlayer Technology



Benefits of Microlayers:

- Increased strength
- Improved thermoformability
- Enhanced barrier properties

Two additional extruders can be used to deliver two layers of material to a special feedblock that splits the flow into 20+ very thin layers.

This creates alternating layers that can be positioned in the core of the structure.

Barrier properties can be enhanced (such as alternating PA and EVOH microlayers)

Mechanical properties can be improved (for example, alternating different PP or PS).

Material can also be drawn deeper and thermoforms better in corners. This translates to making better products with less material.

Macro provides high technology sheet extrusion lines for a wide range of value-added applications.

With over 35 years experience in machinery design and processing knowledge, Macro's team of experts can deliver a extrusion system specifically tailored to match your production goals.

Learn more about our sheet extrusion lines by visiting us online - www.macroeng.com.

