Mono-material Flexible Packaging

The use of mono-material PE flexible packaging can improve recycling rates, reduce waste, and promote the sustainable use of resources compared to multi-material packaging. Inteplast has developed BOPE and Low SIT PE films to support these initiatives.

Recyclable Mono-Material Packaging

Mono-material polyethylene (PE) flexible packaging has several recycling benefits compared to multi-material packaging. These include:

1. Easier to recycle: Mono-material PE packaging is made from a single material, which makes it easier to recycle compared to multi-material packaging that is made from several layers of different materials.
2. Improved recyclability: Mono-material PE packaging is often recyclable, and when it is, it can be made into new products such as trash bags, irrigation tubing, or even new packaging.
3. Reduced waste: Mono-material PE packaging can be recycled, so it reduces waste and prevents it from ending up in landfills or the ocean.
4. Better resource utilization: The use of mono-material PE packaging promotes the circular economy by ensuring that the same material is reused, reducing the need for virgin materials.
5. Simplified collection: Mono-material PE packaging can be easily sorted and collected for recycling since there is no need to separate different materials.

In summary, the use of mono-material PE flexible packaging can improve recycling rates, reduce waste, and promote the sustainable use of resources compared to multi-material packaging.

Circular Economy

The circular economy is a concept that promotes a more sustainable approach to production and consumption by emphasizing the reuse, recycling, and regeneration of materials and products. In the context of flexible plastic packaging, the circular economy can be applied in several ways:

- Design for recyclability: Packaging manufacturers can design flexible plastic packaging to be easily recyclable, with materials that are compatible with existing recycling infrastructure. This includes using mono-material films or multi-material films that can be easily separated for recycling.
- Collection and recycling: Flexible plastic packaging can be collected and recycled through various programs such as curbside recycling, drop-off locations, or through dedicated collection programs that target specific types of packaging.
- Regeneration and reuse: The circular economy also emphasizes the regeneration and reuse of materials. Flexible plastic packaging can be recycled into new products. Inteplast is in process to gain ISCC Plus certification to promote advanced recycling initiatives.
- Material innovation: The circular economy also encourages the development of new recyclable materials and technologies that incorporate sustainability.

Overall, the circular economy offers a framework for making flexible plastic packaging more sustainable by promoting the reuse and recycling of materials. By adopting this approach, it is possible to reduce waste, conserve resources, and minimize the environmental impact of flexible plastic packaging.

Mono-material Solutions

BOPE Films

Developing and supplying a full suite of high-strength BOPE films while providing downgauging opportunities and the ability to replace PET, Blown PE, OPP, and MDO films.

- High tensiles with low elongation
- Low film haze with high clarity and gloss
- Metalized and High Barrier film available for extended product shelf life
- Excellent printability for enhanced brand promotion
- Sealable and nonsealable products

Engineered Films

Innovative low seal initiation temperature (SIT) sealant webs for mono-material applications support flexible packaging converters and brand owners looking to switch to recyclable, polyethylene (PE) pouching. These low SIT films improve processing for the low melt point PE skin layers.

- Reduced SIT of up to 40°F compared to traditional sealants
- Enhanced physical properties vs. traditional PE sealants
- Enhanced seal performance and wider seal window for faster sealing and throughput
- Better caulkability for more consistent seals and lower channel leakers
- Enhanced seal-through contamination
- Options available to match customer needs, including enhanced oxygen barriers

Case Study: Stand-Up Pouch

The conventional solution to the demands of traditional stand-up pouch applications is to utilize a mixed laminations of multiple films (PET, OPP, Nylon and/or PE). Inteplast supplies a mono material flexible packaging solution to this complex and challenging application featuring recycle-ready compatibilizers.

The Solution

- Outer-web: BOPE Film – D1K, non-sealable, print web
- Inner-web: PCBF-EVX-RR, Low-SIT recycle-ready sealant with EVOH barrier

Case Study:
Fresh-Cut Produce

Packaged lettuce and vegetables are brought to the market in various rigid containers and mixed material, flexible packaging laminates. By utilizing Inteplast's BOPE and Low SIT film solutions, produce packers can provide the highest level of source reduction coupled with an all polyethylene mono-material package suitable for recycling. The films are compatible with today's inks, adhesives, and anti-fog coatings.

The Solution

- Outer-web: BOPE Film – D1K, non-sealable print web
- Inner-web: PCSP-APX, Low-SIT sealant for all-poly pouching

Case Study:
Cold-Seal Packaging

Traditionally, cold-seal packaging utilizes an all BOPP film construction with a clear reverse printed outer layer laminated to a metalized barrier layer.

The Solution

Inteplast offers two BOPE films that provide one recyclable solution PE recycling streams:

- Outer-web: BOPE Film – D1K, non-sealable, print web
- Inner-web: BOPE – Z1K, non-sealable, metalized barrier web

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