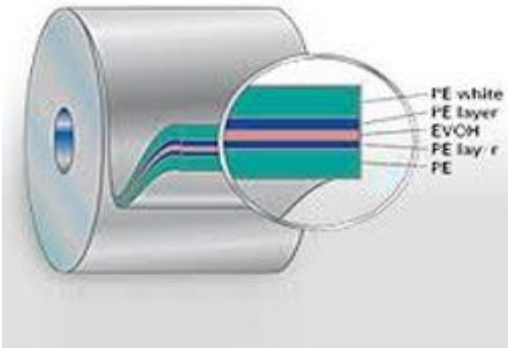
MULTICOLOUR FLEXIBLE PACKAGING

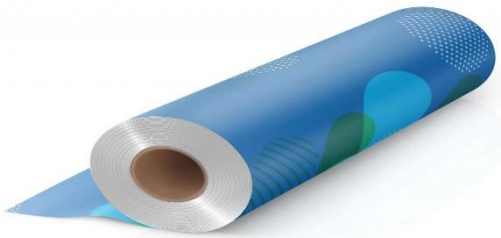
1. Multi-layered Barrier films

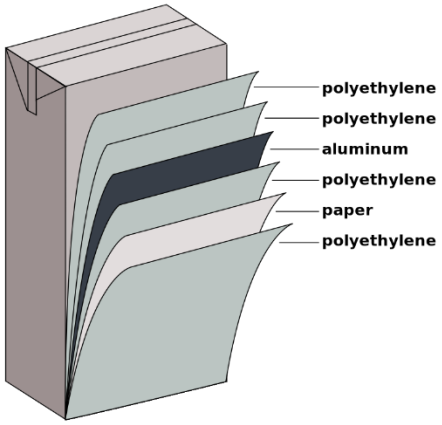
Sunpro Multi-layer barrier films are flexible films that prevent water, oxygen, light and other elements from entering or exiting a product's packaging. Multi-layer barrier films are used in various flexible packaging applications including:



- Bags
- Pouches
- Blister packaging
- Forming webs and lidding

While all films have some level of permeability, Sunpro Multi-layer barrier films offer several advantages over traditional, single-layered films. For example, these films offer:



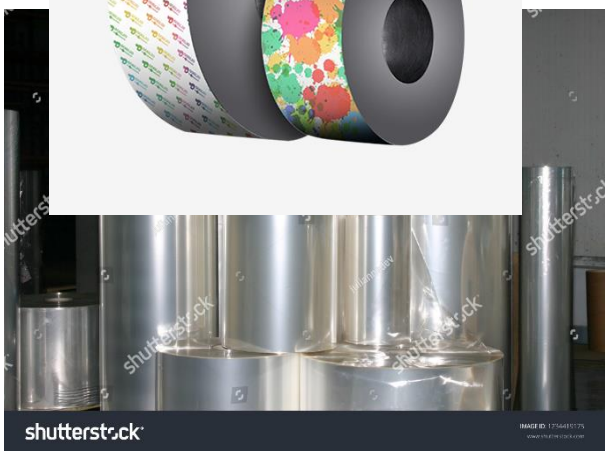


- The ability to incorporate value-added features such as resealable zippers and sliders
- Faster machining speeds
- Increased heat tolerance and strength due to ongoing substrate improvements

There has been increasing demand for packaging materials that give greater protection to the contents inside. This has stemmed from concerns over plastics' ability to allow the exchange of gases that can compromise the quality and safety of packaged products.

Sunpro Multi-layer barrier film technologies help preserve perishable goods such as foods, beverages and pharmaceuticals. These films also:

- Extend shelf life
- Reduce the need for preservatives
- Provide transparency and gloss



2. Flexible Laminates

Sunpro Flexible Laminates are manufactured by Laminating process where two or more flexible packaging webs are joined together using a bonding agent.
The substrates making up the webs may consist of films, papers or aluminium foils.
Sunpro flexible laminates are produced by ways of either Extrusion Lamination, Solvent based Adhesive lamination, Solventless Adhesive lamination or Hot Melt Lamination and also by combinations of 2 or more methods as may be required for end application.

Sunpro flexible laminates improves the barrier properties of the packaging material in order to protect the packaged item and increase its shelf life.

Sunpro flexible packaging laminates provide three main functions:

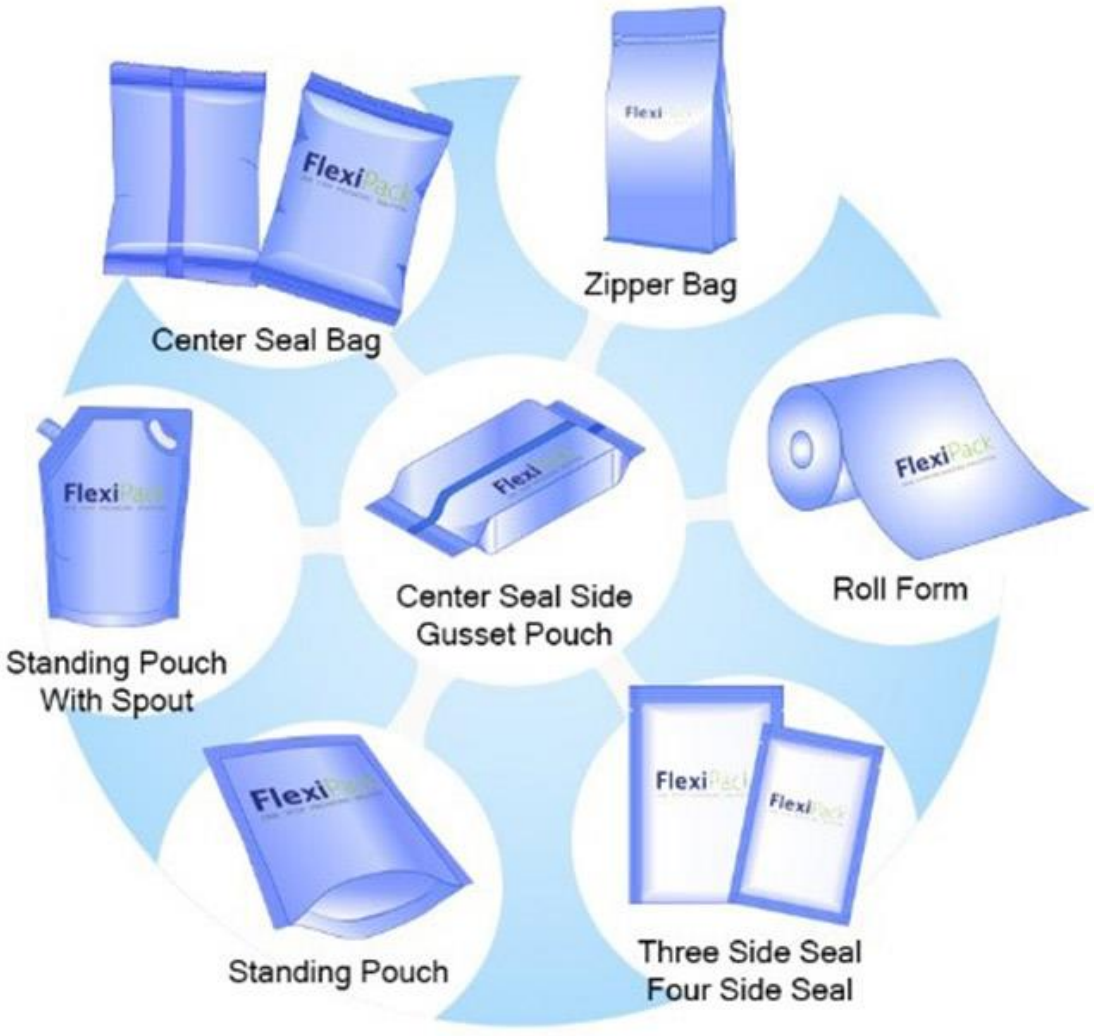
a) Mechanical properties that improve the strength of the material by making it more resistant to tearing, punching etc. that protect it, during packaging, distribution and storage.
b) The barrier properties that protect from outside deteriorating agents (i.e. light, moisture, gas, oxygen, pathogens and spoiling agents) and also prevent loss of the product qualities such as freshness and aroma in the case of food.
c) The substrate sealability that hermetically closes the flexible packaging.

We at Sunpro have the facility for 8 colour printing on these substrates. This can give the packaging the much-needed attractiveness and help our customers to present their brand in more communicable way to their end customers.

Applications:

Basically, all applications where the product needs to be protected and its shelf life extended.

This applies to a huge variety of food products for human and animal consumption, but applications are almost as common for non-food products, which can require functional and highly technical film structures. In the food sections, these range for packaging of ready-to- eat products such as snacks, ice creams, biscuits, drinks or products such as coffee and frozen food, to applications such as boil-in-bag pouches or freezer-to-microwave products. In the non-food section, laminated materials may be used for insulation, solar panel back sheets and packaging of liquids for the cosmetic industries.



3. Flexible Pouches & bags

Sunpro Flexible pouches are single-use bags commonly made of metal foil, plastic, and occasionally, paper. They are used for packaging everything from snack foods to industrial liquids and are commonly found on supermarket shelves across the globe.

Sunpro Flexible pouches have become extremely popular over the past few years for food packaging. This is because many of them are resealable, environmentally friendly, and cheaper than alternatives like glass, metal, and cardboard containers.

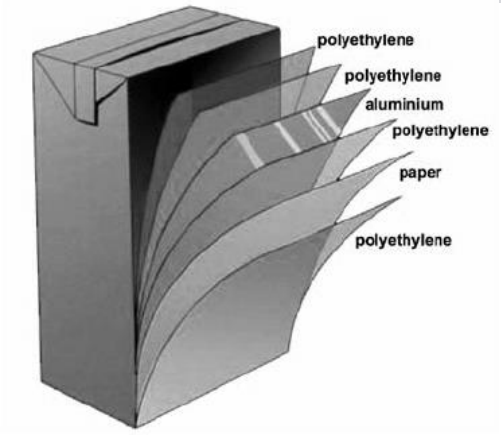
They are used for packaging everything from granola to energy drinks. Their widespread adoption is linked to the fact that they have a much lower carbon footprint than the alternative packaging materials mentioned above and take up much less space in our landfills.

Types of Pouches :

- Center Seal
- Three Side Seal
- Four Side Seal
- Standing Pouch
- Gusset Bag
- Zipper
- Spout

Product Category	End Application	Type of bag used
Frozen Food and Vacuum Products	Frozen seafood, Crab sticks, Sausages, Ice cream etc.	Vacuum bag, Standing Pouch, 3 Side Seal
Powder Products	Flour, Milk Powder, Artificial Cream etc.	3 Side seal, Gusset Pouch
Liquid Products	Vegetable oil, Fabric Softener, Pesticide, Body Shampoo etc.	Standing Pouch, Zipper Bag

Product Category	End Application	Type of bag used
Instant Noodle Products	Instant Noodles	Center Seal, Gusset Bag
Agriculture Products	Rice, Sugar Seeds etc.	Center Seal, 3 Side Seal
Chemical Products	Food Coloring, Fertilizer etc.	Center Seal, 3 Side Seal, Gusset Pouch, Standing Pouch
Snack Food Products	Potato Chips etc.	Center Seal, Gusset Pouch
Bread and Confectionery	Candy, Chocolate etc.	3 Side Seal, Gusset Pouch
Retort Products	Curry, Aloe Vera, Rice, Ready-To-Eat Food etc.	3 Side Seal, Center Seal, Standing Pouch



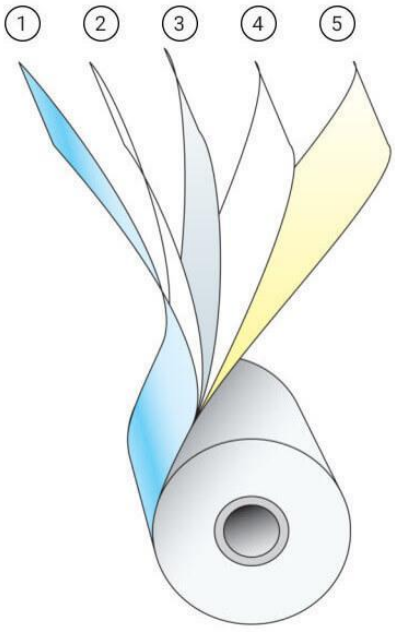
4. Custom engineered Flexibles

A flexible packaging structure typically consists of multiple layers of materials laminated together, with each layer performing a crucial role in your packaging's performance and presentation.

Each layer provides specific performance characteristics, such as:

- Oxygen, moisture, or light resistance
- Chemical resistance
- Puncture resistance
- Tear resistance
- Rigidity
- Glossy or matte appearance
- Opacity or translucency
- Heat sealability
- Print receptivity

The example below shows the duties each layer performs within a basic five-layer extrusion laminated flexible packaging structure:



1. Exterior Layer
   - Provides dimensionally-stable print surface
   - Protects the ink
   - Protects the barrier layer
   - Plays a role in burst strength & tear resistance
   - Adds to overall pouch strength
2. Tie Layer
   - Provides another layer of protection for the barrier layer
   - Bonds the outside layer to the barrier layer
   - Hides the color of the barrier layer

3. Barrier layer
    - Provides chemical resistance
    - Prevents moisture, light, and oxygen transmission

4. Tie Layer
    - Bonds the barrier layer to the sealant layer film
    - Provides protection for the barrier layer

5. Sealant Layer
    - Allows the flexible packaging structure to be heat-sealable
    - Provides burst strength
    - Seals the product within
    - Protects the barrier layer

Based on your requirements (including regulatory, cost, and aesthetic requirements), packaging equipment, product formulation, projected life cycle, and distribution methods, we can custom-engineer and suggest optimal flexible packaging structures for each of your products. Flexible packaging offers a wide range of customization. You're able to select and optimize your product packaging in practically any shape or size to ensure you are meeting the needs and wants of your target market, and speaking their language.

The ability to print with high-quality graphics on most flexible materials allows you to reduce costs in labeling while adding the eye-catching impact your product needs to stand out among the competition in the retail space. This allows you to be more competitive in the retail space as well.

Unique and creative packaging is going to stand out on the shelf. This brings opportunity to drive more interest and sales your way.