

Multilayer Co-extruded Blown Films

Three Layer Co-extruded Polyolefin Blown Films are used for a wide range of flexible packaging and industrial applications for the mass market. These films are surface printed with a variety of colours for branding and product information and supplied in roll form to the end users who use 'Form - Fill - Seal' technology for packaging their products. Main raw material is polyethylene (LDPE / LLDPE / HDPE) and thickness of the films can range from as low as 20 microns to as high as 500 microns.

Applications of 3 layer (ABC type) polyolefin co-extruded blown films

Food Packaging	Non Food Packaging	Non-packaging
<ul style="list-style-type: none">• Milk• Edible Oil• Water• Bread bags• Spices• Ready to eat snacks namkeens, potato chips• Chewing tobacco & mouth fresheners• Heavy duty packing for rice flour• Stand up pouches	<ul style="list-style-type: none">• Flexible lami tube• Shrink collation film• Stretch & Cling Film• Bag liners• Heavy duty sack liners• Medical packaging• Agricultural films• Anti-fog lidding films	<ul style="list-style-type: none">• Surface protection• Silage bags• Mulch & Green house films• Diaper & personal Hygiene films

It is a high technology product using indigenous know-how and high precision machinery & specialty raw materials, very low labour requirement, clean process with no pollution and fast growing consumption demand. We have long expertise in the field and are working / have worked on various projects in this field.

Indian packaging market to reach \$ 73 billion by 2020

Organized retail and boom in e-commerce to fuel growth of plastic packaging, as India is expected to be among the top ten packaging consumers in the world by 2016, says a FICCI-TSMG report (source Business Standard, 2017). The packaging industry in India is expected to reach \$ 73 billion in 2020 from \$ 32 billion in FY 2015, according to a report by FICCI and Tata Strategic Management Group (TSMG) titled 'Plastic packaging: The sustainable choice'. In the coming years, Indian packaging industry is anticipated to register 18 percent annual growth rate, with the flexible packaging and rigid packaging expected to grow annually at 25 percent and 15 percent, respectively.

The per capita packaging consumption in India is quite low at 4.3 kg, compared to countries like Germany and Taiwan where it is 42 kg and 19 kg respectively. However, organized retail and boom in e-commerce, which offer huge potential for future growth of retailing, is giving a boost to the packaging sector. Today, plastics are the material of choice in packaging for the sectors such as FMCG, food and beverages, pharmaceuticals etc. Flexible plastic film packaging improves hygiene quotient and shelf-life of the products especially in food and beverages segment and provide visual appeal for customer attraction and convenience. Plastic packaging film enables shipping more products with less packaging material bringing down overall transportation cost. Besides this, plastics can be reused and recycled.

5 Layer Barrier Films incorporate a Nylon or EVOH barrier layer in the middle. Typical construction is L/LDPE : Tie layer : Nylon or EVOH : Tie layer : L/LDPE. Nylon and EVOH barrier highly reduce transmission of oxygen and moisture through the package thus protecting the perishable food products from deterioration and increasing their shelf life. Main end applications include Edible Oil pouch, Pure Ghee pouch, Dairy products, Frozen vegetables, Frozen ready-to-fry snacks, Meat & Fish, Basmati Rice, Confectionary etc.

7 Layer High Barrier Films are widely utilized for Modified Atmosphere Packaging (MAP) applications. MAP is extensively used for packaging of the products that are highly oxygen sensitive and need to be stored in controlled atmospheric conditions. Main end applications include Edible Oils that require longer shelf life, Cheese bags and Dairy Products, Frozen Meat and Marine Products, Processed and Snack Foods, Vacuum pouches for Cashew Nuts, Dry Fruits and Spices, Aromatic and Beverage products like Tea and Coffee, All types of Ketchups, Curries & Pastes, Laminated Tubes like toothpaste, Shampoo, Detergents etc.

We are a leading Project & Technical Consultancy organization in the polymer field. As a first step we can prepare a Techno Economic Project Report to present a realistic picture for your management decision making, approaching banks for project finance and Govt agencies for statutory clearances. We can provide Know-how and related technical services for the implementation of the project – Selection & Sourcing of Equipment, Utility & Support facility, Commissioning of plant, Compounding & Processing know-how, Quality Control & Testing, Trial run of plant, Marketing advice etc.

Typical contents of the Techno Economic Project Report are given below

- 1.0 Introduction
- 2.0 Production Volume & Project parameters
- 3.0 Manufacturing Process & Technology
- 4.0 Production Flow Diagram
- 5.0 Plant & Machinery with basic specifications and indicative prices
- 6.0 Quality Control & Testing Lab with basic specifications and indicative prices
- 7.0 Utilities & Support facility with basic specifications and indicative prices

- 8.0 Estimated Project Cost
- 9.0 Manpower Requirement & Cost
- 10.0 Estimated Product Cost (raw material, production cost, overheads)
- 11.0 Estimated Turnover, Profitability & Project Payback Period
- 12.0 Working Capital requirement
- 13.0 Machinery & Chemicals Suppliers List
- 14.0 Different End Applications and Key Market Segments
- 15.0 Product Guiding Specifications & Testing Standards
- 16.0 Factory Area & Building requirement
- 17.0 Market Scenario – Estimated production, Main producers with capacity & location, market potential and growth prospects

We look forward to a fruitful association. .

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