

## AMPL23 PACKAGING & DECORATION OF PLASTICS

1. Introduction of plastic packaging,
2. Plastics- performance all wrapped up, ASTM terminology, Flexible packaging material, Indian scenario, Desirable attributes of commonly used flexible materials.
3. Multilayer extruded films, troubleshooting, multilayer films- polymers for layers, barrier materials, comparison of 3 layer and 5 layer films co-extruded by blown film process.
4. How different co-extrusion films affect Blown film performance, laminates/ Multilayer films parameters for acceptance.
5. Lamination techniques. Printing on films/ laminates, print evaluation, troubleshooting in print lamination, extrusion coating and lamination.
6. Designing a packaging line, important accessories for packaging machine, sealing methods.
7. Selection criteria for flexible packing materials.
8. Product performance requirements for laminates. Flexible pouches. Aluminum foil based laminates.
9. Some special properties and important application of co-extruded films / sheets. Pouches form/ fill/ seal. Laminated tubes.
10. Barrier packaging, Laminates/ Multilayer films- parameters for acceptance.
11. Decoration of plastics by printing, colouring, embossing, Metallizing films and paper etc.
12. Recycling: i. Packaging reduction, recycling and disposal guidelines. ii. Recycling methods.

### Reference Book:

1. Recycling of Flexible Plastic Packaging, 1st Edition Author: Michael Niaounakis  
Imprint: William Andrew, Published Date: 4th December 2019