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Users Guide to Film Packaging



The UK's largest distributor of Polypropylene, Laminates and Special Films

Background –

The properties of single web films can be significantly enhanced by the addition of coatings. The results of laminating materials together can produce films tailored to provide the ideal pack environment for any application. The following is a short summary of some of the more common types of materials, the benefits they provide and some indication of their applications.

GUIDE TO materials used

FRESH MEAT

**PET/PE-EVOH-PE
 PA/PE
 Barrier coated PET/PE
 With/without antifog**

Excellent gas and moisture barrier,
 various sealing options available

FRESH FISH

**OPA/PE
 PA/PE
 PET/PE-EVOH-PE
 With/without antifog**

Good gas and moisture barrier and aesthetics

CHEESE

**OPA/PE
 PA/PE**

Performs very well in vacpacking using a top
 and base web application or HFFS packing blocks

ETHNIC BREAD

**OPA/PE
 PET/PE-EVOH-PE**

Excellent gas and moisture barrier. EVOH can
 be added for long life products

SPICES/PULSES

**PET/LLDPE
 OPP/LLDPE**

Excellent strength, can be used for aggressive
 or powdery spices

INSHELL NUTS

**OPP/OPP
 PET/PE
 OPP/CPP**

Good aesthetics, strength and machinability

LIQUIDS i.e.

marinades, sauces,
 shampoos, solvents

**PET/LLDPE
 PET/PE-EVOH-PE
 PET/FOIL/PE or SURLYN**

Film specification depends on how aggressive/
 viscous the product

BOX WRAPPING i.e.

cigarette packs, cartons,
 phone cards

**High speed OPP
 (includes PVdC and acrylic
 coated OPP)**

Superb machine speeds, aesthetics and pack
 performance

BISCUITS

**OPP
 PVdC coated OPP
 Natureflex NK**

Oxygen barrier often needed (PVdC) to prevent rancidity

CRISPS/SNACK FOODS

**OPP/OPP
 OPP/METOPP**

Cost effective material, metallised for barrier

glossary

OF TERMS

- PET** Polyester – high clarity, high strength at low thickness and excellent printability, hence normally used at 12 micron as a carrier web in a laminate. Available barrier coated or metallised for extra barrier properties. Polyester has added advantage of being dual ovenable and is suitable for a range of applications in this capacity as a single-web, heat sealable film.
- OPP** Oriented Polypropylene – the workhorse of flow-wrap applications. Frequently used in laminates due to printability, clarity and moisture barrier. Gas barrier is poor however. Also PVdC and acrylic coated as well as metallised and white or pearlescent are available for specialist applications.
- OPA** Oriented Polyamide/Nylon – superb optics and an excellent gas barrier, can be expensive but can make an invaluable constituent of a laminate particularly where puncture resistance is important.
- PA** Polyamide or Nylon – This material is a cast film and therefore lacks the printability and barrier of its oriented relative. Extruded with PE, makes an excellent top web or VFFS film for most general applications.
- EVOH** Ethyl Vinyl Alcohol – very expensive but superb oxygen barrier as well as offering resistance to attack from aggressive products. It is generally used at reduced thicknesses, widely utilised in preference to PVdC coatings.
- Alu-foil** Aluminium foil is available in a wide range of thicknesses. Superb light, gas and moisture barrier offer ultimate product protection whilst adding extra strength and rigidity.
- PE** Polyethylene – a massive range of blends encompass this particular specification from high density (HDPE) to low linear density (LLDPE). The most commonly used specification in laminating is LLDPE which has excellent sealability in harness with both a high moisture barrier and high strength. The material can be extruded with EVOH to give an improved barrier or with a high EVA content to improve sealability.
- Surlyn** An ionomer and when used as a sealing layer its advantages outweigh conventional PE. Due to its ability to seal through contamination and withstand aggressive substances it is quite often part of a bespoke specification for particular products.
- SiOx/PVOH** Barrier coatings for PET or PP give an excellent gas and moisture barrier and avoid the need for unpopular PVdC coatings.
- Chalk-based film** This material is available from 40 micron to 800 micron. It can be extruded in blown and sheet form dependent on the final application. The structure comprises less than 50% polymer and more than 50% calcium carbonate. Again it can be tailored to specific projects. An environmentally sustainable film with dead fold, extra rigidity, gas, light and moisture barrier where required.
- Natureflex** Compliant with EN13432 standard for compostability, this film is derived from sustainable wood pulp making it an environmentally friendly packaging option like no other. Various barrier coatings, including metallisation, mean these films are suitable for a wide variety of products and applications not previously suited to compostable packaging.
- SuperEco** A 'greener' PP film, this product is designed to break down safely in landfill around 100x more quickly than standard plastic films. This offers a more environmentally friendly packaging option for an enormous range of applications, without an excessive on-cost or compromising machinability.
- rPET** A heat-sealable, dual-ovenable polyester film which has around 30% recycled content in its structure. Suitable for lidding PET trays or flow-wrapping, this option is extremely popular with many of the major retailers.