

glossary packaging materials

Primary packaging is the wrapping or containers handled by the consumer.

Secondary packaging is the term used to describe larger cases or boxes that are used to group quantities of primary packaged goods for distribution and for display in shops.

Transit packaging refers to the wooden pallets, board and plastic wrapping and containers that are used to collate the groups into larger loads for transport, which facilitates loading and unloading of goods.

uses of materials:

PET-Polyethylene terephthalate - Fizzy drink bottles and oven-ready meal trays.

HDPE-High-density polyethylene - Bottles for milk and washing-up liquids.

PVC-Polyvinyl chloride - Food trays, cling film, bottles for squash, mineral water and shampoo.

LDPE-Low density polyethylene - Carrier bags and bin liners.

PP-Polypropylene - Margarine tubs, microwaveable meal trays

PS-Polystyrene - Yoghurt pots, foam meat or fish trays, hamburger boxes and egg cartons, vending cups, plastic cutlery, protective packaging for electronic goods and toys.

OTHER-Any other plastics that do not fall into any of the above categories. - An example is melamine, which is often used in plastic plates and cups.

process terms

Aluminium Foil

Aluminium foil is used in an extremely wide range of packaging applications. It comes in thicknesses as low as 5.8 microns (very thin) and goes up to whatever you need. From delicate chocolate wrappings to milk bottle tops (remember them) aluminium foil has it all. Great barrier to gas, moisture and light. The problem of its relatively low strength can be overcome by lamination to a wide range of other materials.

Biaxial Orientation

Orientation of plastic films in both machine and cross-machine directions by a process of stretching. Biaxially Oriented films are usually more rigid and exhibit greater tear strength than their cast equivalents.

BOPP

Biaxially Oriented Polypropylene – BOPP as it is widely known is stretched in both machine and cross-machine directions. This stretching helps to give rigidity to the material which subsequently aids runnability through many packaging machines. BOPP comes in many forms; clear, metallized, pigmented, cavitated etc... BOPP is superb for flexo printing, laminating, perforating and slitting.

Cellulose Film

A flexible film made from natural fibres. It has excellent clarity and can be produced in many forms; metallized, pigmented, pearlescent etc... Its downside is cost but its upside is its fully closed loop cradle to cradle.

Cold Seal

A pressure sensitive adhesive coating applied to plastic films, papers or laminates that will allow materials to be sealed by the application of pressure. No heat needed! Ideal for ice cream and chocolate etc...

Flexographic Printing

The process of applying ink to a flexible material using a photopolymer or rubber printing plate. Ink is first applied to an anilox roller (see separate definition) which meters the correct amount of ink onto the print cylinder. The print cylinder, which now has ink applied to the raised areas of the printing plate, is then brought in contact with the material to be printed. As soon as the ink is applied it passes through a drying blast of hot air ready for the next colour to be applied. Flexo – as it is widely referred to – is a versatile, cost effective way to print materials for packaging and other applications.

Gravure Printing

A printing process using chrome-plated engraved rotating cylinders. Gravure print gives superb results and is suited to longer print runs primarily as the cost of origination is high when compared with flexo.

Lamination

Joining 2 layers of material together with a form of adhesive, either solvent based or solventless. Lamination allows the properties of materials to be tailored to the end use.

LDPE

Low Density PolyEthylene (0.92-0.934 specific density). Used mainly for heat-sealability and in bulk packaging applications. Comes in single wound sheet, lay-flat tube, centre-folded sheet etc...

LLDPE

Linear Low Density PolyEthylene. Tougher than LDPE and has better heat-seal strength, but has higher haze.

MVTR

Moisture Vapour Transmission Rate - is usually measured under conditions of 100% relative humidity. It is measured in grams of water per square meter per 24 Hrs.

OPP

Oriented PolyPropylene – where would we be without OPP? The word Oriented tells us that the material has been stretched in one direction, thus giving it good stability (i.e. reduced stretch). OPP has a superb surface for flexo printing and is also crystal clear. When used in its coated form (PVDC and/or acrylic) it can also offer a good gas barrier. A superb base for metalising. When printed, metallised OPP can give some striking effects.

OPA

Oriented PolyAmide (nylon) – superb optics and gas barrier. Most commonly used as a component in a laminate with PE.

OTR

Oxygen Transmission Rate. The OTR of a material varies considerably with humidity. Standard conditions of testing are 0, 60 or 100% relative humidity. The units OTR is quoted in are cc per square meter per 24 Hrs. This information would usually be quoted on a manufacturers data sheet for a given material.

Pantone

The Pantone colour system is a universal colour matching system that enables people to give a colour reference they would like their design to match.

Perforation

The process of piercing a material with holes to enable wrapped product to breath or to allow trapped air to escape from a pack.

PET

PolyEthylene Teraphthalate – or Polyester to give it its more common name is high in clarity and high in strength, at low thicknesses. PET has a wide range of applications but is most commonly used as a lidding film having been laminated to another layer of material. Available in a coated form with PVdC or metallised for an extra barrier. Good printability and strength make this a very versatile packaging film.

PVDC

PolyVinylidene Chloride. A very good oxygen and water vapour barrier, however it is not extrudable. It is usually applied as a coating to improve barrier properties of other plastic films, (such as OPP, PET or paper) for packaging.

Slitting

Slitting is the process used to slice or cut wide reels of material into narrower reels for use on packaging machines etc...

Substrate

A generic term for a material to be printed or converted. It can be applied to paper, film, laminate, aluminium foil etc...

Surlyn

Used as a sealing layer it outperforms PE. Surlyn's ability to seal through contamination (dust, powders etc...) and withstand aggressive substances means it can provide solutions to some tricky packaging problems