Decoding The Different Types of Packaging Products [A Complete Guide]

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The packaging industry uses a wide range of raw materials as well as printing technologies to produce packages that not only just look good, but also helps us keep the actual product well secured.

Packaging comes in different forms, and each type has its own applications, its own pros, and cons. If one had to break down the plethora of packaging products and segregate them into various categories, here’s how the major packaging products will be segregated:
Primary packaging basically consists of products that directly come in contact with the actual product—food, accessories, clothing, gadgets. This section consists of all the packaging products included in retail packaging, food packaging, as well as void fill options, that end users have seen and used.

Laminated Pouches
Laminated pouches are bags made from polymer sheets or metallized plastic sheets that have an extra layer of laminating plastic on top of them. These pouches provide extra durability when compared to regular plastic bags. They are available in multiple forms, such as zip pouches, stand up pouches, or as regular mailers. Laminated pouches are also highly customizable as the inner layer can be printed in full colour. The external lamination also ensures that the print does not wear easily, making them ideal for retail packaging of goods.

**Plastic containers**

Plastic containers include a wide range of containers made from high-density polyethene. Plastic containers include everything from plastic bottles, to disposable food containers, to reusable containers. These containers are widely used because they are cheap, resistant to chemical corrosion, physical wear and tear, and is also recyclable and reusable. Plastic containers can be bulk produced by injection moulding. These containers are very commonly used for food packaging, packaging medicine, oil and lubricants, chemicals, and beverages.
Thermoformed products

Thermoforming is a process in which plastic sheets are heated to a temperature where they become soft and can be moulded or trimmed easily. A heated plastic is first stamped into shape and then the individual stamped pieces are trimmed. Plastics that are used in the thermoforming process are called thermoplastics. Thermoformed products include plastic containers, such as meat trays, egg trays, disposable food containers and blister packaging.

Tin Can

Tin cans are one of the most common packaging solutions that can hold diverse contents. Tin cans have been in use for a very long time. Tin cans replaced glass containers before plastic containers became easily available. Tin cans are still used today in a large number of areas. However, use of tin cans for packing food has been reduced. Tin cans used for packaging of soft drinks are laminated on the inside with a plastic sheet as tin corrodes when it comes in contact with acid. Tin is still used in packing aerosol sprays such as insect repellants, lubricants, or perfumes. Lighter fluids and other oils often come packed in tin containers. Dry food such as cake, biscuits, health drink mixes, tea leaves, or coffee beans come packaged in tin cans as the health risk in these cases is not there. Tin cans can be recycled easily and are more eco-friendly than plastic as tin is also biodegradable.
Parchment Paper

Parchment paper is a cellulose-based paper that is commonly used in baking. This is also known as baking paper or bakery paper. Parchment paper is manufactured using a process that is similar to tracing paper. Modern parchment paper is made from paper pulp processed using sulphuric acid. Parchment paper has high density, heat resistance and non-stick properties. Parchment paper eliminates the need to grease sheet pans and thereby allowing batches of baked good to be turned around very quickly. Parchment paper is also used in other cooking processes that involve steaming the food in pouches of parchment paper.

Wet-strength paper

The wet strength of the paper is how much resistance the paper is to rupturing once the paper is wet. Wet strength paper is a type of paper that has high resistance to being ruptured or torn when it is wet. Wet strength paper can be printed and customized just like normal Kraft paper, is biodegradable, and provides a varying degree of wet strength. Wet strength paper is commonly used to make lawn and leaf bags that are ideal for disposing of yard waste.
Lamitubes

Lamitubes or laminated tubes are tube packaging that is used to pack pastes. Lamitubes have multiple layers of plastics, is heat sealable and provides long-term barrier packaging. Lamitubes may also be metallized. It also has gas barrier properties, has resistance to oil and grease. Lamitubes are excellent for packaging of pharmaceutical and cosmetic products that come in the form of paste such as toothpaste and topical ointments. They are also used in packaging adhesives.

Monocarton

Monocartons are simple boxes that are made from paperboards. Mono cartons are often used as retail boxes as they can be easily printed, laminated and customized. They also offer protection from minor splashes, drops and bumps.

Retort pouches
Retort pouches is a type of food packaging that is made from metallized plastics. Metal foils are laminated using plastics that offer the rigidity of metals as well as the corrosion resistance of plastics. These provide sterile food packaging that is an alternative to tin cans. Retort pouches are used to pack high caloric, fully cooked, frozen MREs (Meals, Ready to Eat). Retort pouches can withstand high temperatures and the food can be cooked right inside the pouch with the package sealed. Retort pouches are also used to pack other raw food items. Some variants of retort pouches have a bottom gusset and are called a stand-up retort pouch.

**Paper-foil laminate**

![Image of paper-foil laminate](image.png)

Paper-foil laminate is paper laminated with aluminium foil. The paper and the foil has complimentary properties that make the paper foil laminate a durable and low-cost packaging material. This metallized paper is often used to make paper plates, recyclable food packaging, wrappers for chocolates and other food products. Paper foil laminates are also laminated with plastic layers to improve their barrier properties and to improve the wet strength of the sheets. These make stronger pouches for wet food products, such as sauces and pickles.

**Composite Cans**
Composite cans are made from multiple layers that provide it rigidity and certain barrier properties. Composite cans are made from paper, paper boards, aluminium foils and plastic laminates. This makes them ideal for food packaging. The packaging used for Pringles are composite cans. Other similar dry food items, such as biscuits, health drink malts, and tea leaves are packed using composite cans too. Composite cans are used as an exterior protective covering for glass bottles containing drinks.

Glass containers

Glass containers are the oldest storage containers that are still used today. Glass bottles are widely used to pack carbonated drinks, juices, alcoholic drinks, and also milk. Glass can be recycled and sterilized with ease. Glass is also highly resistant to corrosion. This makes glass containers ideal for storing chemicals in laboratories. Glass containers such as major jars are used in retail packaging of jam, jelly, pickles and sauces – food that is acidic in nature and can corrode other materials over prolonged exposure.
Shrink Wrap

Shrink wrap is a polymer plastic that wraps tightly around whatever it is covering when heat is applied. Shrink wrapping is used as an overwrap to protect the retail packaging or to bundle multiple packages. Packages such as bottles are commonly bundled together into a multi-pack using shrink wrap. Books, DVD or CD covers, boxes, beverage cans, cartons are covered using shrink wrap for tamper resistance. Shrink wrap is also used on larger scales to temporarily repair damaged roofing. Small vehicles such as cars, boats or helicopters are covered in shrink wrap when they are being shipped to prevent any scratches on the paint.

Cling Film

Cling Film or plastic wrap is used to wrap food and plastic containers to keep perishables fresher for a longer period of time. Cling film is used widely in bakeries to wrap bread and related food products. Cling films prevent exposure to air and moisture thereby preventing the formation of moulds on food. Plastic containers are also wrapped using cling film to secure it. Cling films also have medical uses. Cling films are used to wrap premature babies immediately after birth to prevent a rapid change in temperature before they arrive at
neonatal intensive care unit.

**Woven Sack**

![Image of woven sacks](Picture Courtesy: WovenSacks.in)

Woven sacks, made from HDPE or natural fibres such as jute, are used for heavy-duty packaging purposes. These sacks are commonly used to transport agricultural products such as fertilizers, fruits, vegetables, animal feed, food packagings such as flour and maize, geotechnical engineering supplies such as cement, sand, and stone chips.

**Jute bags**

![Image of jute bags](Picture Courtesy: WovenSacks.in)

Jute bags are eco-friendly and extremely durable bags made from natural jute fibres. Jute bags are used as an environmentally friendly replacement for plastic bags by retail stores. Jute bags can be easily printed and used as an retail packaging for products. Tote bags made from jute are quite common. Larger sacks made
from jute are also used to store seeds, fertilizers, vegetables, or other agricultural products.

**IBC/FIBC**

Intermediate Bulk Container or Flexible Intermediate Bulk Container are large bags made from woven polyethene or polypropylene that is used for transporting flowable dry products. These products are sand, cement, plastic granules, fertilizers, food products, fibreglass, pigments, or even hazardous waste materials. These bags are also used to erect temporary walls during floods and they are more effective than traditional sandbags. The carrying capacity of these bags is around 1000 kilograms, making them ideal for moving the products inside warehouses.

**Paper bags**
Paper bags are recyclable, reusable, biodegradable and are a practical replacement for plastic bags in retail spaces, offices or grocery stores. Paper bags can be highly customized, can be manufactured to take any size, shape or strength at very low costs. Paper bags of low grammage Kraft paper are quite common in departmental and grocery stores. Higher quality paper bags are used by larger stores. Paper bags can also be laminated with other materials, such as woven fabric or plastics to make them stronger. These multiwall bags can be used food products or construction materials.

**Bubble Wrap**

Bubble Wrap is used as a protective cover for fragile plastic items. Bubble wrap has regularly spaced air filled pocket that acts as a padding, protecting the contents of the box from drops and bumps. Bubble wraps are used to protect glass containers, expensive electronics, furniture, electrical appliances and even books during the shipping process. Bubble wrap is also used as in inner protective lining during the manufacture of some packaging products. These include paper envelopes, cardboard boxes and messenger bags. Bubble wrap also has multiple alternative uses. They are a good insulator and is also used to keep water pipes from freezing or to maintain the shapes of bags and shoes for display in stores.

**– Secondary Packaging –**

This strata of packaging involve all those products that would help secure mass quantities of primary packaging with the final product inside it. Industrial crates and trays are mostly used in warehouses, in industrial areas, or in institutions where goods are stored or are transported in bulk.

**Plastic Crates**
Industrial plastic crates made from hard plastics are reusable and stackable containers used to organize and transport products in departmental stores and warehouses. Plastic crates come in two types – with perforated walls, or without. Some of them are also foldable so that they can be stored easily. Departmental stores use plastic crates to store fruits, vegetables, grains, seeds, or any other products that do not come with a packaging. Beer bottles and milk bottles are also bundled using plastic crates. Plastic crates are also used in the textile industries, fisheries and pharmaceuticals.

**Plastic Trays**

Plastic trays are reusable open plastic containers that are generally used for organization purposes. Plastic trays are used in departmental stores, retail stores, shops and warehouses for keeping small things organized. Such trays are used in agriculture and horticulture too, where saplings or fruits and vegetables are stored temporarily in these trays. The main advantage of plastic trays is that they are cheaply available and can be reused for long before they wear out.

**EPS trays**
EPS trays or expanded polystyrene trays are lightweight, recyclable, food grade trays are used to pack food items. These trays are stackable, resistant to heat, comes in multiple colours and can be easily branded. This makes these trays and the ideal choice for serving food in schools, hospitals and other institutions, as well as for packaging cooked food. These trays can also be used for packaging raw food materials, such as meat or fruits. Using a cling film, the product can also be made airtight.

**Wooden Crates**

Wooden crates are a very common product storage and transportation solution. Wooden crates are recyclable, reusable and can even be repaired easily. They are used extensively in markets to store products. In warehouses, factories and storages, wooden crates make it easier to move things around. Wooden crates can also be stacked, bundled, loaded on pallets and easily moved around with forklifts.

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**Tertiary Packaging**

During transportation and shipping, most pallets are very commonly used. Other than that, containers made from wood or corrugated fiberboards are quite popular too.
Corrugated fiberboard consists of fluted corrugated sheets made using corrugating machines. These fibre boards are extensively used for making boxes and envelopes for shipping and transportation purposes. These boxes are extremely lightweight and exhibit anisotropic strength in the direction of the “flutes”. They are also recyclable, easy to customize and label. Corrugated fibre boards are also used to make retail boxes.

**Wooden Crates**

**Wooden Containers**

The wooden container is a large category of containers including everything from wooden crates to trays to baskets made from wood. Wooden containers are reusable, recyclable, biodegradable, and can be repaired easily if damaged. Wooden boxes have a wide range of uses when it comes to storage and transportation of products. Being rigid in nature, wooden boxes also provide optimum protection during shipping. Everything, from fruits and vegetables, to even small vehicles can be shipped in wooden containers. Wooden containers
can also be customized and branded very easily, making them ideal for retail packaging scenarios. Anything from cigars, liquors, tea and coffee, cosmetics, food items, electronics, and many more other products are sometimes packed using wooden containers.

**Wooden pallet**

A wooden pallet is a flat surface that helps in transporting items easily using a forklift or a pallet jack. A wooden pallet is extensively used in warehouses and in freight shipping. Wooden pallets are made from softwood and are the cheapest. Goods are loaded onto pallets, often stacked vertically and moved using machinery. Since all pallets come in some standard sizes, they can work with almost any machines.

**Plastic pallet**

Plastic pallets are made from recycled HDPE or PET. Plastic pallets are used in scenarios where durability is a high requirement. Unlike wooden pallets, plastic pallets do not rot, can be sanitized easily, is not as much as a fire hazard as a wooden pallet, is lightweight and non-splintering. Plastic pallets can take heavy loads for
prolonged periods without deformation setting in. The upfront cost of plastic pallets are high, but in warehouses and freight shipping that intends to save up in the long term, uses plastic pallets. Moreover, plastic pallets are also used in places where exposure to moisture and chemicals would have damaged wooden pallets.

– Ancillary Packaging –

No packaging industry will survive with tapes, adhesives, straps, labels and printing inks. These are essential consumables for the industry that allows them to efficiently and securely store and ship products, as well as organize and customize them.

Adhesives

Adhesives are chemical compounds that are used to initiate the adhesion of two or more objects. There are multiple types of adhesives, depending on their application. Adhesives are used in industries and at homes on a daily basis and can be categorized into two main categories – for large-scale uses and for home uses. The former is used in packaging, construction, manufacture of electronics, assembly of vehicles, or heavy machineries, furniture manufacturing, and more. For home uses, adhesives are used for rejoining broken materials, to mend shoes, for art and craft purposes or to pack gifts.

Printing Inks
Printing inks come in various types, based on the printer and the substrate to be printed on. Standard inkjet printers have dye-based inks. Some printers also use pigment-based inks, especially in the industrial scenario, where crisp and clear print is needed. Dye-based inks have better colour reproduction but can get soaked in the paper, reducing clarity. Other printers, such as lithographic and flexographic printers use thicker inks that come in form of a paste.

**PP Straps**
PP Straps or polypropylene straps are used to tie down, bundle, reinforce or stabilize goods before they are transported. Strapping is usually done in warehouses and during the shipping process and is seldom known to the end user. PP straps require specialized hardware that allows the straps to bind the goods securely and stay fastened using a separate hook.

Caps & Closures
Caps and closures allow closing the open end of plastic jars and bottles. Caps and closures are used in household plastic containers, such as bathroom cleaners, floor cleaners, glass cleaners, household insecticides, detergent containers and so on, in healthcare products, such as medicine bottles, topical ointment tubes, spray bottles, in food product packaging (such as ketchup bottles), in beverage bottles and also in cosmetic product containers. Caps and closures provide make it easy to dispense the product, provides child safely and also improves the shelf life of the product.

**Tapes**
Tapes are a widely used packaging as well as a packaging customization material. Tapes come in different materials, colour, and size. Different tapes have different advantages. Plastic tapes are mostly used in the packaging industry, in gift wrapping, and also in arts and craft. The packaging industry also uses paper tapes, but they are used less than plastic tapes. Paper tapes are more used in painting applications, as masking tapes as well as in arts and craft.

Labels
Labels are used extensively in the packaging, shipping as well as the manufacturing industry. Labels make it easier to put product information right on the product itself. Manufacturers use labels to add the branding, serial and batch numbers, contents, safety information, precautions, and more details. Labels can be made from paper, plastics, metals, or a combination of these materials. Paper labels are the cheapest. It is much easier to print on paper labels. Self-adhesive labels are also easy to stick to the product. Plastic and metallic labels are more resistant to moisture and wear from regular use. Packaging and shipping industry extensively use labels to add addresses and packaging details on the shipment.

Cushioning Material
Cushioning material, also known as void fill, are soft materials used to protect fragile items during shipment. Besides protection, these materials also make the packaging aesthetically pleasing in certain cases. During shipping, packages are impacted in various ways. The products may get damaged from bumps, shocks and vibrations. Cushioning materials absorb the impact and reduce the chance of a damaged product. Common cushioning materials include bubble wraps, air packets, bubble wraps, moulded polystyrene, crinkle paper and packing peanuts. Different cushioning materials are used for different products based on weather resilience, resistance to shock and vibration, sensitivity to static electricity, environmental issues, the size and weight limitations, cleanliness of the product and more.
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