

# Packaging

Every day we come across with so many types of packets, tubes and other containers, the production and selection of which come under the study of packaging, which dovetails materials of packaging and functions of packaging.

Davidson claims that packaging is one of the lowest cost and highest leverage areas of marketing activity and unlike advertising it can close a sale once it operates at the point of purchase. He also provided a checklist for packaging development based upon the following 4 aspects:

- Protection of contents
- Consumer convenience
- Trade appeal
- Consumer sales appeal

Cox and Brittain commented that since so many products are pre-packed and because there is such a fight for shelf space, pack design is important to the retailer who may decide to accept or reject a pack just on the basis of its design rather than its contents such as its dimensions or 'stackability'.

Packaging is hence the 'silent salesman' in the self-serviced world, and without packaging noticeability, the product will unlikely be selected from the selves.

Packaging includes the activities of designing and producing the container for a product. The container is called package, which can be of 3 types. Let us try to understand this with a perfume box.

- Primary package: This is the first layer of packaging that primarily protects the product. For example, in our case, the glass bottle containing the perfume is the primary package.
- Secondary package: This is the next layer of packaging that protects the primary package. In our example, the cardboard box containing the glass bottle is the secondary package.
- Shipping package: This is the final layer of package used to protect the primary as well as secondary packages during the time of transportation. In our example, the corrugated boxes containing many perfume packs are the shipping packages.

Packaging requires several decisions:

- Packaging concept: This defines what the package should be or do for the particular product in terms of size, shape, materials, colour, text, brand mark and tamperproof ability
- Engineering tests: This will ensure that the package stands up under normal conditions
- Visual tests: This is to ensure that the script is legible and colours are harmonious
- Dealer tests: This is to ensure that the dealers find the packages attractive and easy to handle
- Consumer tests: This is to ensure favourable consumer response.

## Functions of Packaging

Packaging performs four basic functions:

- 1) Protection
- 2) Containment
- 3) Information
- 4) Utility of use
- 5) Promotion

### Protection

One of the major functions of packaging is to provide for the ravages of time and environment for the natural and manufactured products. The protection function can be divided into some classes viz.

- **Natural deterioration:** It is caused by the interaction of products with water, gases and fumes, microbiologic organisms like bacteria, yeasts and moulds, heat, cold, desiccation (dry environment in deserts and high-altitude areas), contaminants and insects and rodents.
- **Physical protection:** The packaging is also used for physical protection, which include improving shock protection, internal product protection and reducing shock damage caused from vibration, snagging, friction and impact.
- **Safety:** A special kind of protective packaging is required for products that are deemed hazardous to those who transport them or use them. These product include highly

inflammable gas and liquid, radioactive elements, toxic materials etc. The packaging should also be done so that children could not easily use or dispose them.

- **Waste reduction:** Packaging also serves to reduce the amount of waste specially in case of food distribution

## Containment

This involves consolidation of unit loads for shipping. It starts with spots of adhesives on the individual shippers that stick them together, straps of steel and plastic, entire shrouds of shrinkable or stretchable plastic films and paper or corrugated wraps that surround an entire pallet of product. There are some special bulk boxes or pallet bins made from unusually strong corrugated board or fabricated from plastics or metal, the method of which depends on the type and weight of product and its protective needs. The cargo containers made of aluminium used to hold many pallet loads of goods can be transferred to or from ships, trains and flatbed trucks by giant cranes.

## Information

The packaging conveys necessary information to the consumers. The common information that packaging provides include general features of the product, ingredients, net weight of the contents, name and address of the manufacturers, maximum retail price (MRP). Packaging of medicine and some food products is required to provide information on methods of preparations, recipes and serving ideas, nutritional benefits, date of manufacturing, date of expiry, warning messages and cautionary information. Sometimes, the colour of the packaging itself provides some information. For example, orange colour of the bottle of Mirinda or Fanta conveys the information that these brands are of orange coloured soft drinks.

## Utility of use

The convenience packaging has been devised for foods, household chemicals, drugs, adhesives, paints, cosmetics, paper goods and a host of other products. This type of packaging includes dispensing devices, pre-packaged hot metals, disposable medical packaging.

## Promotion

Companies use attractive colours, logos, symbols and captions to promote the product that can influence customer purchase decision.

## Materials of packaging

Despite the diversity of packaging forms and end uses, all packaging is constructed basically from 4 materials such as:

- Wood and wood derivatives
- Glass
- Metals
- Petrochemicals

### Wood and wood derivatives

Wood is one of the oldest and commonest forms of packaging. The wooden boxes and cartons are extensively used. In case of wooden derivatives, paper is the most common material of packaging. Paper is made from paper and some other materials such as cotton, linen, papyrus and sugar cane fibres. Paper and paperboard made of paper and some other substances are used in grocery bags, bulk bags, pulp containers, rigid paperboard boxes, folding cartons, corrugated shipping containers, bulk paperboard bins and fibre cans, drums, tubes and cores.

### Glass

Glass is a mixture of sand (silica), limestone (lime) and soda ash (anhydrous sodium carbonate). Other materials are added to give glasses special properties or colour. The major drawbacks of glass are its weight and fragility. There are 6 basic types of glass containers:

## Bottles

These are characterised by narrow necks and mouths, which facilitate pouring and minimize the sizes of closures needed. They are generally used for liquids and are closed with screw-type, snap-on, plug or clinched caps of metal, plastic or cork. Bottles are also used as pressure packages, primarily for toiletry and some pharmaceutical applications, where the impervious nature of glass is important. These bottles, either coated or uncoated are fitted with push-button nozzles.

## Jars

These are the wide-mouthed bottles, which are used extensively for foods and drugs, particularly where the product is in discrete pieces. All manners of viscous, solid and semi-solid products are packaged in this container, which is closed in the same way as bottles, but with larger closures.

## Tumblers

These glass containers, used primarily for jams and jellies, have no necks, but are totally open at one end and are closed with a clinched friction cap of metal or plastic.

## Jugs

These are another type of glass containers normally used to carry liquids.

## Carboys

These are shaped like bottles, but are of very heavy glass and often protected by metal, plastic or wooden crates or plastic drums that facilitate handling. The contents are generally industrial liquid chemicals.

## Vials and ampoules

These are tiny thin-walled glass containers generally known for their use in the portion packaging of sensitive drugs. A vial for injectables has a complex closure comprised of a rubber stopper and metal seal that permits direct withdrawal of the contents into syringes. Other vials are sometimes closed with stoppers or screw caps. An ampoule has a long, narrow neck that is sealed in a flame to prevent the product's contact with any material less impervious and reactive than glass. The ampoules are mainly used for antibiotics and also for expensive cosmetic, perfume and food ingredients.

## Metals

The metals like steel and aluminium in combination are most commonly used metal in packaging. These two metals with protective coatings either of other metals or of plastics are fabricated into different types of containers, which are described below:

### Cans

The cans are prepared as a three-piece construction like:

- ⤴ Forming a flat sheet of metal into a tube with crimped and soldered side seam
- ⤴ Folding gasket top and bottom metal ends around flanges in the can body; and
- ⤴ Rolling the ends tight and double-seaming them to provide a hermetic closure.

The bottom end is applied by the manufacturer whereas the top end is done by the canner after filling. Welding and cementing the side seam with special adhesives are alternative ways of forming the can body. Cans are also drawn from a metal disk, forming a one-piece can body that requires only a lid. Advantages if these methods are that they all eliminate lead solder, a highly undesirable food contaminant and all have fewer nooks and crannies to trap particles that cause can corrosion. Instead of tin, aluminium is now mostly used as the material of can as it has the advantage of lighter weight and greater resistance to chemical interaction with products. Since steel cans are easier to open with conventional can openers, aluminium bodies are sometimes

combined with steel ends. On the other hand, where a ring-pull hand-opening end is used, an aluminium end is much easier to remove. When a product like coffee is not dispensed completely on opening, plastic reclosure lids are added as an extra convenience. Ring-pull openings for beverage cans, which were sharp, detachable triangular bits of metal that created hazards in use, have now been replaced by new type of openers that remain attached to the lid. Nowadays, paper and plastic cans are also extensively used.

### **Pressurised containers**

The gas-pressurised container fitted with a push-button dispenser enables the consumers to obtain a liquid stream, foam or a true aerosol dispersion of micro droplets. Personal care products, household products and insect sprays are the major products in pressure packages.

### **Pails and drums**

These are also used especially for carrying liquid materials.

### **Collapsible tubes**

These squeeze tubes are mostly used in toothpastes, shaving creams, pharmaceuticals (ointments) and cosmetics. Tubes are formed by impact extrusion of aluminium, tin or tin-lead materials (lead is not used in case of food products) and are fitted with a variety of dispensing closures. The dispensing tube can also be completely sealed with a puncture or break-off feature for products of unusual environmental sensitivity. The product is filled through the bottom of the tube, which is folded and crimped. Plastic tubes are also used nowadays, which are generally made by extrusion or are made from complex laminated sheets.

## Semi rigid trays and cups

These types of packaging containers are formed from thin aluminium foil. The containers are closed with crimped-on paperboard covers or hermetically heat-sealed lids made from metal, plastic or plastic-coated paperboard.

### Advantages

- ^ Strong barrier protection for the inner product
- ^ Lightweight
- ^ Good transmission of heat to speed the freezing process and subsequent heating process.

## Petrochemicals

The newest and fastest growing packaging material is plastic, a petrochemical product. The major advantages possessed by plastics are lightness of weight, high strength-to-weight ratio, generally good resistance to product constituents and an ability to tailor the bottle material to the protective needs of the product including transparency or opacity. Plastics can be made in a larger number of shapes because of its high flexibility in forming. Because of thinner wall sections, a plastic container occupies less space per container volume than a glass container; thus. Plastic bottles conserve space in shipping, storage and display. Today plastics are extensively used in following types of containers:

## Squeeze bottles

Bottles made of Polyethylene (a plastic variant of higher density and chemical resistance) are used for the spray dispensing of deodorants and other personal care products. New opportunities in the field of plastic squeeze bottles have opened up with the development of alloyed and co-extruded plastics that provide greater resistance to certain chemicals and increased barrier properties that enhance strength and function in bottles.



## Tubes

This type of plastic packaging is mostly used for personal care items such as hair colorants and shampoos. A laminated material fabricated into a tube has captured a large share of toothpaste and lubricants market. The advantage of this plastic packaging is that it resists puncture to a higher degree than the metal tube and it can be sealed more tightly at the base.

## Sheet-formed containers

These types are formed by the process of heating a plastic sheet and then shaping the pliable material. The process has been adapted readily with the advent of transparent plastic sheeting of uniform quality. The field is divided among:

- ▲ **Skin packaging:** This employs a thin film that is drawn down by vacuum around the product on a sheet of paperboard to which the plastic adheres either by mechanical or fusion techniques.
- ▲ **Blister packaging:** In this method, a rigid bubble of plastic containing a product, is attached to a sheet of paperboard; and
- ▲ **Semi rigid packaging:** This method involves the use of formed semi rigid plastic sheets as the complete product container

These types of packaging are used for automotive hardware, plumbing and other do-it-yourself products. The other uses are toys, toiletries, cosmetics, pharmaceuticals, housewares, electronic parts and jewellery.

## Sachets

Sachetisation is the concept of selling products in small packets (sachets), be it shampoo, hair oil, toothpaste, chocolates or even pan masala.

## Advantages

- ⤴ It boosts sales and increases the profits of a company.
- ⤴ It is convenient for the customers to use and to carry, sometimes even providing an opportunity to try out a better brand.
- ⤴ Increased sales enables companies to invest more money in advertising.
- ⤴ It is an excellent low-cost promotional tool as they are often distributed free of cost with other products.
- ⤴ Packaging costs for sachets are low as compared to the costs involved in using plastic or glass containers.

## Disadvantages

- ⤴ Perennial shortage of small change is a biggest impediment in pricing the sachets. Sachets have to be priced taking into account easily available denominations.
- ⤴ Companies are often tempted to decrease the volume instead of hiking the price to ensure competitive pricing.
- ⤴ The profit margins are lower, so volumes will have to make up for the lower profits.
- ⤴ Retailer margins on small packs tend to be higher leading to erosion of margins.

## Labelling

It means putting labels on the package. It performs several functions:

- **Identification:** By seeing the labels, we can easily identify the product. The labels of well-known product like Intel, Frooti or Ponds can easily be identified even seen from a distance.
- **Gradation:** The labelling helps to grade various types of products. The labels showing various sizes and variants of products help us to identify various types of the products.

- **Description:** Labels also describe the information like the manufacturer, place of manufacturing, ingredients and the mode of use.
- **Promotion:** The labels are used to promote the products through attractive graphics.

This was all about products. It is one of the most important elements of the marketing mix. You must have understood by now how complicated is the process of decision making in area of products. We will discuss the other three elements of the marketing mix in the coming chapters.

