



Industrial Packaging



Consumer packaging – the packaging that starts from a commercial sales point and arrives at the consumer as a sales unit.

Industrial packaging – the packaging that is used to deliver goods from producer to consumer. Industrial packaging is, not always but generally, used to transfer goods to the next point of production.

In short, packaging can have different types and applications depending on the identified destination and the manner of use. In general, several types of packaging come together to make up a packaging system.

Basic functions of packaging may be summarised as;

- Contain,
- Protect/Preserve,
- Transport,
- Inform/Sell

When considering the basic functions of packaging, it must be kept in mind that there may be different packaging classifications.

Primary packaging or sales packaging – this is the packaging that wraps the product when being sold to the end consumer. It contains the packaging that is in direct contact with the product and the other packaging components (e.g. cap and label) that are needed to complete the sales unit.

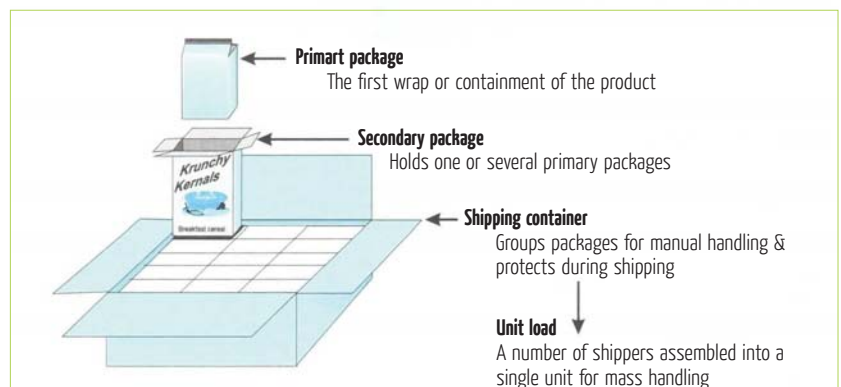
Secondary packaging or group packaging – this is the packaging used for gathering the sales units in order to allow for easy handling practices in the sales environment. This process can be performed by grouping the products in order to sell them to the consumer (e.g. shrink film and corrugated cardboard box).

Tertiary packaging or transport packaging – it is used to facilitate the handling/transportation of a series of sales units or secondary packaging in order to prevent the physical damage that may occur during handling/transportation (e.g. corrugated cardboard box).

Unit load – Unit load is the group of packaging in which more than one delivery packaging are brought together for loading/unloading work (e.g. unit which is repacked on the pallet using stretch film).

Besides functionality, a packaging is also generally defined by the identified point of destination.

For breakfast cereals, primary packaging is the bag that contacts the food; secondary packaging is the printed carton box in which the bag is placed. The basic functions of the bag inside are to protect and preserve the product. Printed carton box physically protects the product, informs the consumer about the product and affects the purchasing decision of the consumer, that is, sells the product. In order to provide additional physical protection and easy handling for the product during delivery to the sales point, 15 pieces of carton boxes are placed in a tertiary packaging that is made of corrugated cardboard. Finally, the products are delivered on pallets, wrapped in stretch film as a unit load, in which corrugated cardboard boxes are made into a single unit in order to





Primary & Secondary Packaging



Tertiary or Transport Packaging

facilitate transportation and distribution.

In some cases, one single packaging may be expected to fulfil all functions. The primary packaging that protects an electronic product may be strong enough to preserve the product and to facilitate its transportation. This packaging can be sufficient to deliver all information needed by the consumers and for selling the product. On the other hand, in general, the functions of informing/selling are less significant for



PC Case Packaging

industrial packaging.

Consumer packaging constitutes majority in number of the packaging that is produced every year all over the world. Industrial packaging, although fewer in number, is used to pack almost the same amount of products as consumer packaging with regard to volume.

The secondary and tertiary packaging that are used for packing the excessive number of products that will be consumed for industrial purposes or for repacking large amounts of consumer packaging in order to facilitate distribution may be defined as industrial packaging.

Industrial packaging is needed when transporting large amount of products from one production point to another. Usually the customer is another industrial or commercial organization which is planning to use the packed product as an input for its production process. From that perspective, industrial packaging includes barrels, palletes or big bags and containers.

Legal Issues

Particularly when products transferred from one manufacturing plant to another are considered, safety procedures and measures become more important since very large amounts of products are being transported.

If the products to be transported are in the classification of dangerous substances, special practices must be carried out for Packaging of Dangerous Substances (see Packaging Bulletin, November-December 2010, file named "Packaging of Dangerous Substances").



IBC - A product of Izvar.

Industrial Packaging Types

Product	Packaging Type	Some Examples
Gas/Liquefied Gas	Pressure vessels	High pressure Oxygen tubes, low pressure liquid gas tubes in kitchens.
Liquids	Barrels (tanks with steel, plastic, fiberglass content)	200 lt steel or plastic barrels are used for many chemicals.
	Big Bag (big carrier bags)	
	Tanks, IBC's	Used in transportation of chemicals.
	Tankers	Fuel oil products are generally transported in tankers.
Solids	Ships	Petrol
	Bags (plastic, paper, big bag)	Solids in the form of granules can be packed in bags.
	Sacks (synthetic or natural)	
	Boxes (carton and corrugated cardboard)	They are generally used as secondary or tertiary packaging.
Containers	Amorphous solids such as coal.	
Wagons		
Tankers		
	Ships	



Metal Barrel – A product of Mauser Ambalaj.

Selection of Proper Packaging for Industrial Product

When selecting the best package for an industrial product, we need to have detailed information about the product to be packed.

- Physical characteristics such as the boiling point, melting point and flashing point of the product,
- Danger degree of the product (whether dangerous chemical or explosive substance),
- The maximum transportable bulk amount of the product (transporting high density products in smaller volumes),
- The most important of these factors is the cross contamination risk between the product and the packaging material.

Flexible Industrial Packaging – Paper and Plastic

Plastic raw materials, cement or cereal-like products up to 25 kg may be packed in 2 to 6-layer paper bags or plastic sacks with open end or valve; larger amounts are generally placed into large transportation packaging such as FIBC



Products of Özler Plastik.

(flexible intermediate bulk container) / “big bag” or “bulk bag”.

Rigid Industrial Packaging – Wooden, Metal, Plastic

As one of the oldest packaging materials, wood has been used for centuries when transporting products from one place to another. Even today, wooden and plywood cases may be preferred for handling some industrial products.

The volumes and abbreviations for United Nations (UN) approved metal barrels that are used for transporting dangerous substances are as follows:

S = Small, 20 – 30 litres

M = Medium, 45/60 – 100/120 litres

L = Large, 180 – 250 litres (mostly 50 gallons=210 litres)



Fiber Barrel

Fiber barrels can be used for packaging solids, semi-solids and some liquids.

Plastic barrels are made in the following volumes:

- Large: 200 – 450 litres; mostly 210 litres (50 gallons)
- Small: 60 litres and below; mostly 20 and 25 litres
- Medium: Volumes between large and small.

The term jerrycan is generally used for rectangular plastic containers. They are no more than 60 litres.

Plastic barrels may have circular or square sections. Those with small volumes have handles as well. They are made of high density polyethylene using extrusion blowing, rotation or injection (small barrels or caps) moulding methods.



Products of Deren Ambalaj.

ASD and SEPA Member Industrial Packaging Manufacturers:

- **Balçoğulları Orman Ürünleri Ambalaj Hayvancılık Otomotiv Taşımacılık San. ve Tic. A.Ş.** – Wooden Pallet, Collapsible Wooden Case, Euro Pallet, Plywood Packaging.
- **Batı Kraft Torba ve Ambalaj San. Tic. A.Ş.** – Industrial Craft Bag Production (Cement, Lime, Gypsum, Construction chemicals, Chemical Substances, Calcite, Fertilizer, Food Bags).
- **Çısan Kraft Torba Ambalaj San. ve Tic. A.Ş.** - Craft Bag for Cement, Lime, Construction Material, Chemistry-Mining, Food Seeds Animal Feed, Compost Sector.
- **Ekerler Kağıt Torba Ambalaj** – Craft Bag for Cement, Lime, Calcite, Gypsum, Construction chemicals, Ready made Plaster, Barite, Bentonite, Silica sand, Other chemical substances and Food Sector.
- **Deren Ambalaj San. ve Tic. A.Ş.** - IBC, Barrels and Jerrycans.
- **Greif Mimaysan Ambalaj San. A.Ş.** – Sheet Metal Barrels.
- **Güngör Plastik** – Plastic Jerrycan, Plastic Barrel.
- **Işıklar Ambalaj** - Craft Bag for Cement, Lime, Construction Material, Chemistry-Mining, Food Seeds Animal Feed, Compost Sectors.
- **İşbir Sentetik Dokuma Sanayi A.Ş.** - Big Bag.
- **İzvar Ambalaj San. ve Tic. A.Ş.** – Sheet Metal Barrel, Sheet Metal Jerrycan, Renewed Sheet Metal Barrel, Plastic Jerrycan, Ibc, Plastic Jerrycan, Fiber Jerrycan.
- **Mauser Ambalaj San. ve Tic. A.Ş.** - Sheet Metal Jerrycan, Sheet Metal Barrel.
- **Oyka Kağıt Ambalaj San. ve Tic. A.Ş.** – Craft Bag for Food, Cement, Lime, Mine, Gypsum, Construction chemicals and Chemical Substances.
- **Özler Plastik San. Tic. A.Ş.** – Plastic Jerrycan, Barrel.
- **Ur-Sa Plastik Çuval San. Tic. Ltd. Şti.** - Plastic (Polypropylene) Sack, Big Bag.

info@semplastik.com.tr

SEM[®]
www.semplastik.com.tr

**A Truly
Production Company...**
Since 1975

e-lite
PLUS



SEM PLASTİK SAN. TİC. A.Ş

Sinekli yolu Alipaşa Cad. No: 5 34570 Silivri / İstanbul - TURKEY
TEL : + 90 212 736 07 37 pbx - FAKS : + 90 212 736 07 53 - 27
E-Mail:sales@semplastik.com.tr
Fabrika 1:1.Organize Sanayi Bölgesi 1.Cadde No:11 Malatya - Turkey
Fabrika 2:Sinekli Yolu, Alipaşa Cad. No:5, Silivri / İstanbul - Turkey



ISO 9001
HACCP

TSEK

İTÜ ÇEVKO

