

# Marine *Newslink*

June 2022



**Packaging can be theatre,  
it can create a story**

*– Steve Jobs*

## **FEATURE ARTICLE**

Packaging

## **PHOTO(S) OF THE MONTH**

## **BACK TO BASICS**

Question Of The Month

Packaging is the technology of enclosing or protecting products for distribution, storage, sale and use. Packaging also refers to the process of design, evaluation and production of packages. Packaging can be described as a co-ordinated system of preparing goods for transport, warehousing, logistics, sale and end use. Packaging contains, protect , preserves, transports, informs and sells.

Properly designed, constructed and sealed packs provide complete containment for the contents, preventing unsightly or dangerous leakage, or loss of parts. This containment must be assured throughout the expected life of the product, including the numerous handling stages from the end of the packaging line to the final consumer use. Containment also means keeping a number of different or the same items packed together, and this applies to primary, secondary and tertiary packaging.



Pic-1 Different Types of Packaging.

Mostly cartons/ shippers are used for packaging of products.

Once you select the basis, depending on your budget, design and sustainability options, these are the types of packaging materials that are most commonly used

### **AA)Corrugated Boxes**

The packaging sector relies heavily on corrugated boxes. Corrugated boxes have been the go-to packing material for years. They are used to package a large number of products on packaging lines all over the world. Corrugated boxes are frequently available in prefabricated rectangular box shapes. They may arrive in flat stacks, in which case the cartons will have to be put together by hand. For packing purposes, corrugated boxes are typically used in conjunction with case erectors. A sort of packaging machinery is case erectors. They can be easily shaped into classic boxes. After that, the boxes are utilised to package and ship things. Electronics, consumer products, DVDs and pre-packaged food items like chips, cereal, biscuits, and cookies are mostly seen with corrugated boxes packaging.

### **BB)Stretch Film**

Stretch film is often used by companies with a shipping department. It's used to keep their products contained on pallets before transportation. This prevents the items from collapsing or being damaged during shipping. Stretch film does this through a process known as "load confinement." Stretch film is often used for multi-pack packing and unitizing. Multi-packs of toilet paper, paper towels, and bottled water are among these items.



*Pic-2.1 Different types of materials used for packaging.*



*Pic-2.2 Different types of materials used for packaging.*

### CC)Shrink Film

Shrink film compositions come in a variety of shapes and sizes. Polyvinyl chloride (PVC), polyolefin(POF) and polyethylene (PE), are the common compositions. Each formulation was created with a specific application in mind. Polyolefin, for example, is the ideal shrink film for wrapping food. Shrink film is used in conjunction with shrink tunnels and sealers to package items. Frozen food boxes, board games are common examples.

#### Stretch Wrap/ Films



#### Shrink Wrap/ Films



**VS**

#### What is Stretch Wrap made from?

Most commonly made from polyethylene plastics.

#### What is it used for?

This type of wrapping is usually employed to hold loads and products together on a pallet for transportation or storage purposes. Stretch wrap can come in a variety of specialty films. Some examples are: UV stretch wrap, vented

#### What is Shrink Wrap made from?

Most commonly made from polyolefin plastics.

#### What is it used for?

This type of wrapping is usually employed to protect a single product from dust or weather; or to tightly combine smaller items together. It can also wrap products together on a pallet; but is less common. This wrapping is widely

pallet wrap, anti-static stretch film, colored stretch film, pre-stretched stretch film, etc.

### **What are the advantages?**

**Protective** – This wrapping is secure and protects products from dust and moisture. It can also protect from sun with UV film options

**Cost Effective** – Stretch wrap is less expensive than other types of pallet wrapping. Additionally the equipment needed for stretch wrapping is cheaper than other forms of wrapping.

**Adaptable** – Stretch wrap has a variety of films to suit each application; and it is even appropriate for different types of surfaces.

### **Available Equipment**

Manual wrappers include the extended core with a film extension used as a handle. Mechanical brakes have a supporting structure with a break resistance system. Pole wrappers involve an extended pole for easier use.

Stretch wrap machines are suggested when wrapping more than 15 loads per day. Stretch wrap machines help to reduce waste and to increase efficiency.

Semi-automatic machines include turntable wrappers where the load is placed on a turntable and wrapped by film which moves vertically. Rotary arm wrappers rotate around a still load to wrap. Orbital wrappers involve feeding the load through a rotating ring of film.

Automatic wrappers involve conveyer belts and automatic machines to cut and seal the stretch wrap.

used for covering foods; for example, cheese, meats and vegetables.

### **What are the advantages?**

**Protective** – Shrink wrap is great for protecting products from weather or moisture damage along with dust and dirt.

**No surface damage** – If shrink wrapping has been properly applied you should have no issues with chafing or damage during transportation or whilst being stored.

**Breathability**- Shrink wrap has the option of being ventilated; therefore reducing any damage that can occur from moisture.

### **Available Equipment**

A heating machine is essential when using any type of shrink wrap.

Some of the shrink wrap machines available for heating are; heat guns which release a stream of hot air, shrink tunnels which are mounted over or around a conveyor system for the product to flow through, along with ovens.

Heat guns are necessary for more professional looking shrink wrap jobs as shrink wrap properly shrinks at 300 degrees Fahrenheit.

Many auto and manual shrink wrapping machines are also available such as L-Bar sealers and I-Bar Sealers.

Most shrink wrap sealing machines can cut and seal the shrink wrap together; and once this has been done it is ready for heating in order to shrink and tighten the plastic to the product.

## DD) Polybags

Polyolefin (or POF) shrink film and polyethylene shrink film are the two most common types of printed shrink film. Shrink film manufacturers (also known as OEMs) most typically sell polyethylene (or PE) shrink film, which is thicker than polyolefin films. Polyethylene is among the most extensively used plastic packaging formulations today, and poly bags are made from it. Because of its small body shape, nice touch feel, brightness, and adaptability, polybags are popular. T-shirts, industry journals, bed sheets, pillows, various mailers, and a variety of other consumer products are typically packaged with them.

## EE) Flexible pouches

Generally, flexible pouches are constructed of foil or plastic (although they can be made of other materials). They're employed in packaging for a variety of purposes. Food and beverage packaging, as well as industrial liquid packaging, are examples of these applications. They can be found on grocery store shelves and in other retail outlets. The food packing industry widely uses these flexible pouches for packaging. They are less expensive to create and have a lower environmental impact than packaging solutions materials such as glass, paperboard, aluminum, and cardboard.

## Packaging Methodology



*Pic-3 Carton/ corrugated boxes need to be taped together in "H" pattern with clear tape.*



*Pic-4 Depending upon the transit Nylon bands (or other types of bands) may be necessary to make the cartons less likely to open upon impact.*



*Pic-5 side view of a "double-wall" (also called "5 ply wall"). As a general rule, a "single wall" is NOT suitable for export packing or for multiple handlings. A thicker wall will provide better protection, but it adds to total cost and to total volume.*

The most common packaging tests are:

- Free-fall carton drop test
- Compression test
- Vibration test

Without running any tests, it is quite possible to check whether all cartons are dry, in good condition, and properly stacked. This only requires a quick visual packaging inspection.

There must be appropriate labelling of the boxes to specify what type of cargo the box is packaging.

Example -

1. Keep away from water
2. The cargo is fragile in nature like Glass, electronic parts

3. Maximum stacking tier limits
4. Which side is to be facing "up"
5. Handle with care
6. Recycle



*Pic-6 Packaging Labels*

A common issue is to avoid excessive empty space inside the cartons, same can be ensured by using fillers or buffer material like styro-foam, shredded cardboard etc. Also make sure that carton edges are provided with adequate reinforcements like corner/ edge protectors.



*Pic-7 Edge Protectors.*



*Pic-8 Use of Foam Boards and bubble wrap*



*Pic-9 Styrofoam Pieces*



*Pic-10 - Shredded Cardboard Buffer*

### Extra measures to protect cartons/ shippers

If there is a possibility that some boxes may get damaged then they need to be plated on palletized and shrink-wrapped. They will be much less likely to drop on the floor and behave as a unitized cargo. Some extra protections like corner protectors and straps will need to be added.

Shrink wrap is also a good measure to prevent wet damage of cartons as well , thus it serves two purposes.



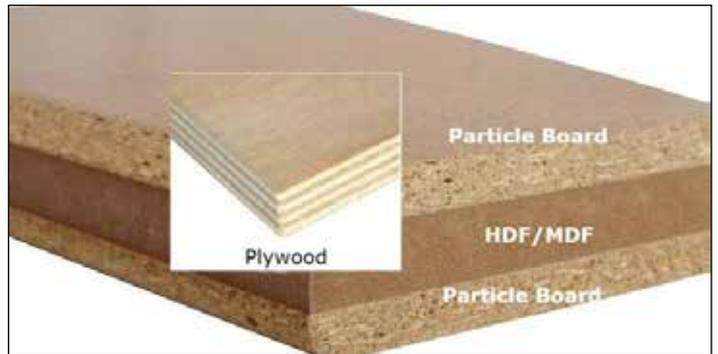
Pic-11 and 12 – Palletized shipments

Using pallets can reduce the time to load and unload the goods by 90% or more. It may be a great source of cost savings.

When the contents are fragile or heavy , extra protection like wood crates/ skeletal wooden boxes or engineered wood packaging might be required.



Pic-13.1 – Wood reinforced crate



Pic-13.2 Engineered Wood like Particle Boards , High Density Fiberboard(HDF) and Medium density fiberboard (MDF) perform much better than real wood in at least some areas. It is a composite material of high quality. MDF is made from resin and recycled wood fibers. It is pressed to produce dense sheets that remain stable in all weather conditions.



Pic-14 - Cushioned pigeon holes - for storage and transfer of production line fragile cargo (automobile industry)



*Pic-15 and 16 - Box in box packaging can be adopted for fragile and high value cargo like glassware and electronic goods.*

*Pic-17 and 18 - If the products are large and valuable, full protection in wood/ MDF/ ply panels is the best option with adequate cushioning inside and restraints that provide movement restriction.*

Together with proper packaging it is also important that the cartons/ pallets are properly secured in the loading vehicle or the seagoing container . Good packaging and good securing go hand in hand to make sure that the goods reach the destination without any damages. Correct loading and securing of goods is essential for ensuring safe transport and loss free delivery of cargo.





*Pic-19 and 20 – Proper securing of packages in transport and containers.*

What causes damages to the packaging and the products?

#### Cause 1: Improper Handling and securing

Improper handling and securing is one of the most common causes of damage to a shipment. Shippers/ cartons may not be secured properly in a transport vehicle and thus will shift inside causing damage. No matter how strong the packaging is, if there is a shift of cargo inside the conveyance then same will lead to cargo damage. Many people will handle a package before it is delivered to the customer's doorstep. No matter how careful the logistics provider can be, there will not be many people who will read the instructions that come with the package before handling it. These experiences leave the customers unhappy and dissatisfied and can cost them money for replacement as well as their reputation.

#### Solution: Stick a Label and Ask for Insurance

While there's nothing you can do about people handling your packages in a specific manner, don't forget to stick a label on the product that clearly says that there are fragile items or items that need to be handled with care.

#### Cause 2: The Size of the Box

The size of the shipping box can be one of the most significant factors behind the orders' damage. If shipping the product in packages that are too big compared to the size of the product, the chances are that the product will be volatile inside the box. It will lead to breakages or sometimes disfigured products. Large boxes have another problem that the courier partner/ logistics provider will charge them more. Remember that logistics providers charge based on dimensional weight, implying that a giant box will incur a higher shipping cost.

#### Solution: Pick an Appropriate Box Size

Take the dimensions of your product into consideration before picking a box for it. Remember that when it comes to packing the items, the compact the box is concerning the product dimensions, the better it is. Make sure the box/ carton/ shipper has enough space for the product to fit in its entirety adequately.

#### Cause 3: None or Insufficient Cushioning Material

Cushioning or padding isn't just needed for a fragile product. Many sellers choose to skip the padding material on non-fragile items, considering their product to turn up in good condition at the customer's doorstep. However, this practice often backfires due to the improper handling of orders by the logistics providers.

#### Solution: Wrap Every Item

It is essential to take care of all your products to be well shielded from shipping damage.

The cushioning material that is chosen will often depend on the type of product and range from a bubble wrap, recycled, crafted paper to air pillows, etc. While wrapping fragile items is necessary, make sure to also use proper dunnage for beauty products, books, accessories, etc.



*Pic-21.1 – Packaging for LCD display – note the foam cushioning on either side.*

#### Cause 4: Perishable Items

Shipping food can be one of the biggest challenges for a business. If selling food items to the customers, logistics can directly make or break your business. Delayed deliveries can make food perish. Since the nature of food items is such, its contents are prone to spillage. More to this, the orders can be infested by rodents or insects if they are kept in such places by the logistics providers. This, most of all happens in the case of international shipments and also pharma shipments where there is strict quality control. Even if the pharma products are in good shape, infestation in the pallets can even cause full rejection of the product.

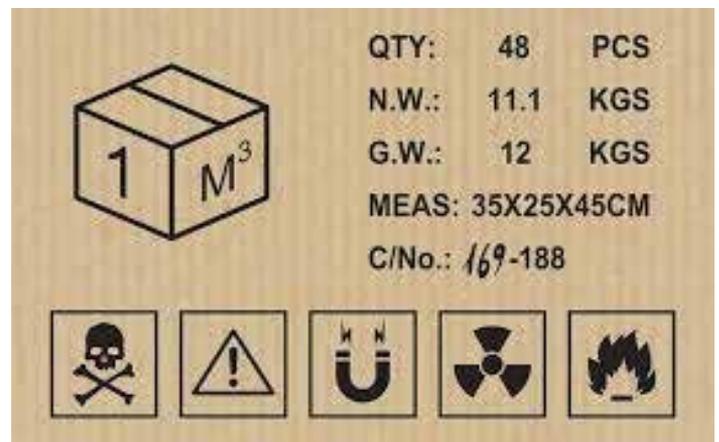
**Solution:** Use Drier Ingredients and Airtight Packing

While one can't altogether avoid the food items from perishing, the best one can do is use drier ingredients while cooking so that the bruising time can be delayed. Make sure that the food is packed in airtight containers that ensure no spillage. Label the boxes appropriately and use appropriate dunnage.

#### Cause 5: Quality of the package

Quality of the packaging is very important, many a times the package may contain goods that the package might not be able to care for. Example – an 8kg alternator in a 5 ply carton with inadequate buffering. The carton/ packaging should be adequate to support the weight of the goods and thus provide safety.

**Solution :** Use adequate packaging depending upon the strength of the carton/ shipper or box.



*Pic-21.2 – Holding capacity of a box/ shipper/ carton*



*Pic-22: Cargo loss due to improper securing*

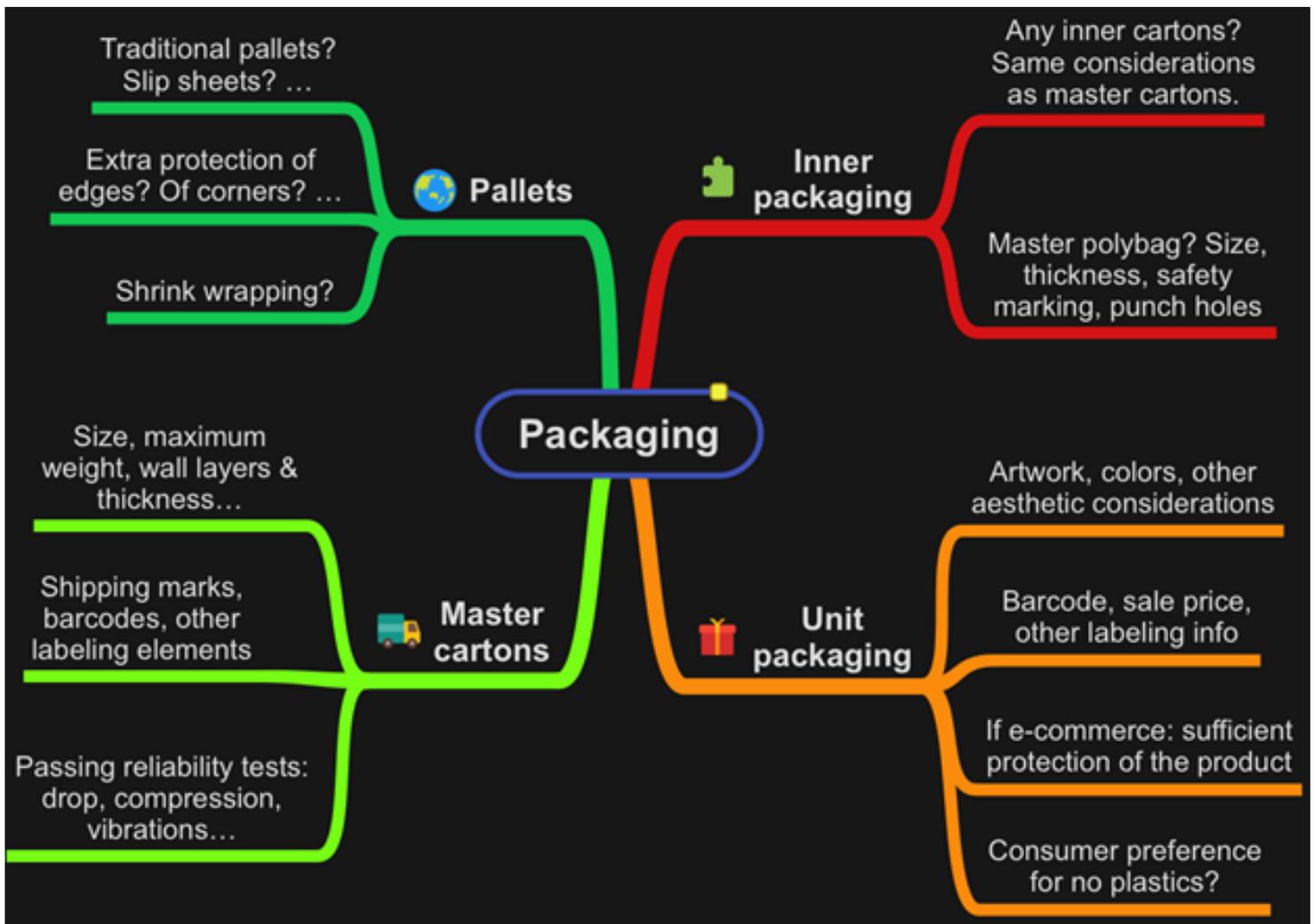


*Pic-23: Packaging damage – handling losses – carton quality*



*Pic-24: Box in box packaging for electronics LCD Display*

## PHOTOS OF THE MONTH



Largest Cardboard Structure

## BACK-TO-BASICS

### QUESTION OF THE MONTH

M/s. XYZ LTD has dispatched medicines from Delhi to Hyderabad.

Insured M/s. XYZ LTD outsourced packaging of cargo.

Agreed packaging of cargo is as follow - primarily packed strips then in cardboard boxes. Multiple Cardboard boxes to be tied with Nylon Bands and further to be shrink wrapped, then palletized and lashed.

At destination, cargo found in wet condition.

During the survey following points were observed - Boxes were not strapped tightly and not shrink wrapped. Hence the packing was not sufficient to withstand the journey.

Policy coverage is Inland Transit (Rail/ Road/ Air) Clause A (All Risks) 2010

Examine the case with standard exclusions/ coverages under Inland Transit (Rail/ Road/ Air) Clause A (All Risks) 2010

Please send your replies/ answers ONLY to: [marine.newslink@tataaig.com](mailto:marine.newslink@tataaig.com)

### LAST MONTH'S QUESTION

Insured Mr. AX in Gujarat sold its imported used machinery to its client YZ Ltd. in Solan, Himachal Pradesh Machinery was dispatched from Vadodara, Gujarat To Solan, Himachal Pradesh on 10-Jan-22.

Insurance was on ITC B + SRCC as machinery was used.

Insurance was taken for a value of INR 5 Crore. Since the machinery was used, coverage was as per ITC B + SRCC.

While passing by the hilly areas, truck toppled and fell deep down in the valley on 12-Jan-22. There was no way to search the cargo and hence to be considered as total loss. Insured reported FIR immediately.

Claim was given for investigation by the insurance company as survey was out of scope.

During investigation of the claim, investigator contacted the owner of the transporter to inquire about the driver and understood that driver has not reported to office since then. He is not traceable.

Investigator then investigated the case with insured and his factory surroundings. During this further investigation, investigator could dig out more from the locals near insured's factory premises and got to know that the factory of the insured is closed for last few months and the machinery was not in a working condition. Though they did not agree to record statement officially.

Later after 2 months, it was identified by the investigator that driver did not have any injury as he jumped off from the truck , just before the vehicle toppled and he went missing after the incidence.

Investigator submitted the report with his own observations to insurance company after 3 months.

In light of these facts, will this claim be admissible under the scope of policy?

## ANSWER

The claim is admissible. Claim cannot be rejected based on investigator's report which is not backed by evidence that can be sustained in a court of law. Insurer is liable to pay.

### **CORRECT ANSWERS SENT BY: (In order of replies received)**

Name	Organization
1. Prashant Bhosale	Aditya Birla Insurance Brokers Pvt. Ltd.
2. Nilesh Deshmukh	Suzlon Energy Limited
3. V Ganesan	Marsh India Insurance Brokers Pvt. Ltd
4. Lokesh Penta	Lokesh Penta @ gmail.com
5. Hema Raghav	Optima Brokers
6. Kiran Mohanty	Harsha Engineers International Limited

**IF YOU HAVE ANY COMMENTS/ FEEDBACK PLEASE SEND IT TO**

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