

# Over two million tons of reused industrial packaging

## Primarily for transport and distribution

It may go unnoticed by the public, but industrial packaging is being reused more and more frequently these days. This is particularly true during the logistical steps taken prior to the product's sale in the shops.

Reusable packaging is especially appreciated for wrapping and protecting professional and industrial products. More than two million tons of reused industrial packaging was declared to recycling organization VAL-I-PAC in 2007.

The industry primarily reuses packaging for the transport, distribution and storage of products. The grouping and transport of products require specific packaging that must fulfil a double role: protecting the product during handling and simplifying its transport in large quantities (see also 'Multiple functions of Packaging' sheet).

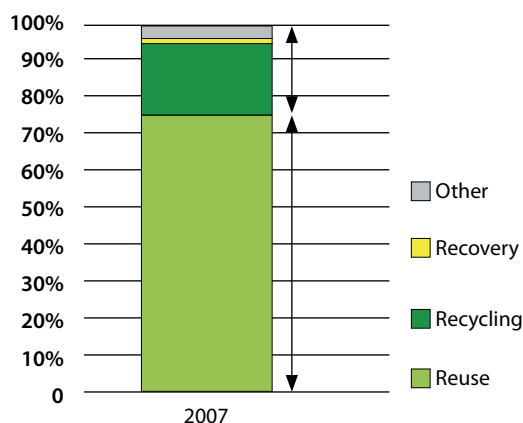
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### Three times more reusable packaging

The members of VAL-I-PAC – an organization whose mission is to encourage and co-ordinate the recycling of industrial packaging – use three times more reusable packaging than single use packaging for the transport and distribution of products.

The number of yearly reusable pallet movements in Belgium has reached 39 million. This figure amounts to 3,5 million for metal and plastic casks. VAL-I-PAC estimates that 2,138 million tons of industrial packaging is reused every year in Belgium. It also states that reusable packaging is being used more and more frequently. In fruit and vegetable transport, for instance, the number of times reusable cases is used is growing spectacularly.

The important role of reusable packaging



good to remember

Investing in a logistical system designed to enable the **reuse** of standardized packaging often results in **cost savings** for the industry.

The quantity of **reusable industrial packaging** is increasing continuously. Today, it is **three times greater** than the number of single use packaging.

The industry primarily uses **reusable packaging** to carry goods to their points of sale and for the supply of **professional and industrial products**.

**Reusable packaging** includes a **variety of materials**: wood, metal and plastics. They are used in a **large number of sectors**.

# Over two million tons of reused industrial packaging

Reusing packaging is often **less expensive**

**By reusing packaging, the industry is able to reduce its costs.**

Of course, the investment and logistical costs are significant, but standardized reused packaging with a high rotation rate has multiple benefits. First, the waste processing cost is reduced, as is the purchasing cost of new packaging. Second, there is no

need for any particular cleaning since there is no direct contact with the goods. Finally, there are no marketing or customization constraints. These elements mean reused packaging is easier and less expensive to use.

Multiple sectors, **a variety of materials**

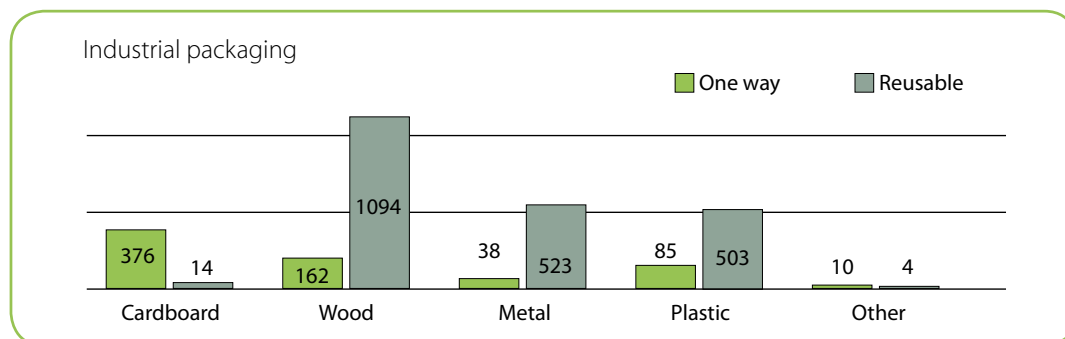
**The number of sectors turning to reusable packaging is increasing gradually.** Some of the most active sectors include the food, automobile, metallurgy, chemical, distribution and glass industries.

Reusable packaging comes in a variety of forms (see graph 2):

- Wood or plastic pallets
- Metal or plastic cases and casks

• Big bags and plastic or strong carton packaging for specific purposes

Certain types of packaging, such as pallets, circulate from company to company. This circulation is facilitated by the standard dimensions of the pallets. Other types of packaging belong to a specific company. This is the case, for instance, with beverage cases or beer casks.



*Pallets, casks, boxes and trays... the industry reuses packaging in numerous forms.*

Taking packaging levels **as a whole**

**As is the case with single use packaging, it is important to consider the various levels of packaging.** Reusable packaging

is primarily used to group together and transport products: the stronger the level of packaging, the lighter the primary

packaging and the greater the protection during transport.

The reuse of packaging at the end of the distribution chain is generally more difficult or impossible to implement for logistical and/or sanitary reasons.

**The industry is finding numerous ways  
to use reusable packaging in the logistical chain.  
It is using it more and more whenever it can.**

For **additional information** :

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# Re-usable plastic baskets for the distribution of clothing: easier, safer, and cheaper



Galeria Inno has been using standard re-usable foldable plastic baskets to transport its textile goods to the fifteen stores in Belgium since 2003. Since then the chain of department stores avoids up to 1,200 tons of cardboard waste per year. This solution also makes the distribution safer and cheaper.

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## Relieving the city centre of waste

**Galeria Inno has contacted a service provider in a distribution centre in Vilvoorde** to distribute its goods. On a weekly basis, the service provider prepares packages of clothing for the fifteen Galeria Inno sites in Belgium. 'Previously everything was packaged in cardboard boxes,' says Rüdiger Hofrichter, Supply Chain Manager for Galeria Inno. In 2003, the organization switched to re-usable foldable hard plastic baskets. Hofrichter:

'Today, we no longer ship cardboard boxes with goods to the stores. This helps minimize cardboard waste, eliminating up to 1,200 tons of cardboard per year.' The plastic baskets leave for the shops filled and return folded, together with a shipment of sorted waste from the stores. The group has invested in a million baskets. All of them have been equipped with an individual barcode to track the transport movements.

## Standardization offers ease of use and safety

**SSI Schäfer supplies the polypropylene baskets.** The baskets retain their shape and are easy to stack and clean. Hofrichter: 'They are also virtually indestructible. The investment will be written off in 25 years, but we are practically certain that the baskets will still be serviceable by then. Per year only 0.05% of the baskets are damaged.'

The baskets fit perfectly on standard pallets. This way, no empty space is shipped. Galeria Inno uses three different dimensions that can be stacked on pallets in various configurations. This way the trucks can be loaded faster, with less risk of accidents and damage during the handling of baskets and pallets.

good to remember

Galeria Inno packages distribution packs in plastic baskets, **avoiding cardboard waste in the stores.**

The transports returning with folded baskets are also used to **collect sorted waste** from the stores.

**Standard dimensions** enable easy stacking and handling of the baskets.

# Re-usable plastic baskets for the distribution of clothing: easier, safer, and cheaper

How does the distribution centre of Galeria Inno operate?



### Step 1: manufacturers deliver in cardboard boxes

Usually, textile manufacturers supply their clothing in cardboard boxes. 'These boxes sometimes arrive damaged because they are not stacked properly during transport,' says Hofrichter.



### Step 2: plastic baskets for transport to the stores

The distribution centre sorts the pieces and prepares packages for the various stores. It sorts items into the foldable plastic baskets, neatly stacked on standard pallets.



### Step 3: sorted waste together with the return shipment

The baskets return folded. The same return transport is also used to ship sorted packaging waste such as plastic foil and used department store bags from the stores back to the distribution centre. The centre is also a collection point for recyclable materials.

Rüdiger Hofrichter, Supply Chain Manager for Galeria Inno

'Our foldable baskets enable us to avoid using 1,200 tons of cardboard per year, which would otherwise end up as waste in the city centres.'

### Your distribution can also save on packaging material

Products have to reach the store shelves in an optimal manner. This requires considerable effort. The general public does not know this and does not see the packaging used in the distribution chain. However, it brings along a large savings and prevention potential.

### Tips from Galeria Inno

- Look at the distribution cycle as a whole. Use the return shipments wisely, for instance to simultaneously collect and return sorted waste.
- Ask Val-I-Pac, Fost Plus, and Comeos for advice. They can be an enormous help in providing customized tips and suggestions.

### Galeria Inno and the environment

The Inno chain of department stores has existed for over a hundred years. It has been a 100% owned subsidiary to Kaufhof Warenhaus A.G. (Metro Group) since 2001. Since 2004, the group has been officially known as Galeria Inno. The company pays **special attention to sustainable development.**

#### Realizations:

- **Structured approach to sorting waste at the stores.** Employees participate in Awareness Training, learning how sorting waste leads to a substantial net profit for the company. They are also given tips on how to efficiently sort waste.
- **Realization of a closed EcoLoop for department store bags.** Used bags and plastic foils are collected and processed by third party partner Papier-Mettler into new customer bags.

# Packaging protects goods during transport

## Matching safety requirements with efficiency and costs

**Safely transporting consumer goods from the manufacturer to the end-user requires specific transport packaging in most cases. This packaging protects goods against mechanical influences, climate variations, hygiene issues, and vermin during transport and storage. There are various solutions available. The wisest choice matches safety requirements with efficiency and costs. To accomplish this, the distribution sector is increasingly using reusable packaging systems.**

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### Protecting against **mechanical influences** and **climate variations**

**Product protection is of vital importance from a prevention point of view. It avoids product damage and spillage.**

The primary and secondary packaging protect perishable products. However, this generally does not suffice to efficiently and safely transport large volumes of goods. That is why the packager or distributor needs to provide additional transport packaging, also referred to as tertiary packaging. Such packaging

offers extra protection against climatic and mechanical influences during transport. Some influences are predictable. For instance, temperature and humidity variations during transport are well-known in advance. However, unforeseen incidents may still occur. A truck sometimes has to brake abruptly, a shipment is often unloaded rather roughly. Transport packaging needs to protect the products against such incidents.

### Evaluating the **packaging system** as a whole

**The initial purpose of tertiary packaging is to transport large volumes of product.** It consists of a system to stack products in their secondary packaging or to bundle them into a larger unit for efficient handling. In general, bulk products are packaged in bags or bales. Most consumer goods, however, are placed in boxes that are stacked on pallets.

Evaluating the quality of transport packaging requires field tests on a complete load, for instance a fully stacked pallet. The Belgian Packaging Institute (BVI) executes such tests at the request of

companies. In its laboratory, it simulates all incidents that can occur during transport. Complete pallets or bulk bags are subject to standard tests. The BVI installations simulate mechanical influences such as vibrations, shocks, vertical pressure, and falls. After each test, BVI measures the extent that the packaging has been moved or reshaped. This helps assess the risk of transport damage. BVI also operates climate chambers to correctly condition the loads or to simulate and determine the influence of variations in temperature and humidity.

good to remember

**Packaging** plays a crucial role in the **protection** of goods during **transport**. A good mixture of primary, secondary, and tertiary packaging is necessary to match **safety, efficiency, and cost requirements**.

Software enables the determination of the **optimal stacking pattern on a pallet**. The packager arranges the boxes as close to the edge of the pallet as possible.

The quality of transport packaging needs to be evaluated based on complete loads. **Laboratory tests simulate incidents** that can occur during transport.

The distribution sector **has been making more and more use of reusable transport packaging** such as the standard returnable Euro pallet or the pallets rented from the CHEP pool.



# Packaging protects goods during transport



## Efficient stacking and stabilizing

**Most consumer goods are stacked on pallets for transport. Safety and efficiency are key during the handling, transport, and storage of such pallets.** That is why the goods need to be stacked correctly and the entire load needs to be stabilized properly.

Software packages enable the calculation of the product's optimal stacking pattern on a pallet. The calculations are based on the given dimensions of the pallet and goods.

They also take into account the desired stacking height and the ability to stack boxes in a certain pattern. Such pattern stacking increases the stability of the entire load. However, it does increase the forces on individual boxes. It is possible to stack the boxes a few centimetres over the edge of the pallet, but this too weakens the boxes.

Boxes can be stacked only 7 cm over the edge. If not, the supporting basis of the entire load is too small and the pallets stacked above weigh more heavily on the boxes below.

## Reusable returnable pallets or a pool system

**The distribution sector has been using re-usable transport packaging increasingly in order to cut costs and avoid waste.** The standard 80x120 cm Euro pallet is in common use. Only recognized companies produce Euro pallets. The pallets are returnable throughout the whole of Europe for approximately 10 euros. The location receiving the pallet pays that amount to the supplier. This way no return transport of empty pallets is necessary. On the downside, when these pallets are broken they lose their value.

The CHEP pallet pool provides an alternative. CHEP is the owner of the pallets and is responsible for the sorting, maintenance, repair, and stock management. Companies can rent the CHEP pallets and can exchange them upon delivery with the receiving party. They can also opt to have the pallets picked up by CHEP.

## For additional information:

-The Belgian Packaging Institute: [www.ibebvi.be](http://www.ibebvi.be)

-CHEP: [www.chep.com](http://www.chep.com)

# New [www.pack4recycling.be](http://www.pack4recycling.be) website

## Check whether your packaging will be recycled

The new [www.pack4recycling.be](http://www.pack4recycling.be) website launched by Fost Plus and VAL-I-PAC informs on the recyclability of packaging under the Belgian collection schemes. The site is dedicated to marketing managers, purchasing managers and packaging designers. It answers numerous questions regarding the recycling of household and industrial packaging.

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A user-friendly tool that **simplifies decision-making**

**About to design new packaging but not sure whether the materials chosen are recyclable? Hesitating between different colours of plastic material? You will find the answers to all your questions on [www.pack4recycling.be](http://www.pack4recycling.be).** For household packaging, the new website has been designed as a decision tree. By answering a series of questions related to the type of packaging, its material or its colour, you will reach a screen informing you of its recyclability. The screen also provides explanations of a negative result.



*A user-friendly menu guides you quickly to the right material.*

The recycling process in **practice**

**The website also tells you which aspects must be taken into account for each packaging material and component.** In the case of plastic bottles, for instance, the site indicates which types of caps, labels and glues they are compatible with. The site also contains plenty of other useful information:

- The main recycling applications for each packaging material are illustrated with pictures.
- Videos are used to present the various recycling processes.
- The Green Dot tariffs are indicated for each material.
- Information is given on the limitations of current recycling systems.

good to remember

The [www.pack4recycling.be](http://www.pack4recycling.be) website tells you whether your **packaging is recyclable** or not in the Belgian system.

The website covers all elements that need to be taken into account to ensure the **best recycling** of packaging.

It also contains plenty of **information** on the recycling processes.

It is designed as a decision support tool for **marketing managers**, purchasing **managers** and **packaging designers**.

It is regularly updated, so **information** on recycling networks for packaging is **always current**.

# New [www.pack4recycling.be](http://www.pack4recycling.be) website

## Answers in a few clicks of the mouse



### Recyclable ? **Yes !**

Besides the test result, other key points are shown, including those for other packaging elements such as caps and labels.



### Recyclable ? **No !**

If a material cannot be recycled, the website briefly explains why. Certain materials may be recyclable in theory, but perhaps not in practice for economic or environmental reasons.



### Recyclable ? **Under specific conditions**

Overview tables clearly indicate which materials are compatible for recycling and which ones are not, as well as those whose usage depends upon specific conditions.



### Advice and **key areas**

The bulb-shaped icons provide additional information and advice. They also indicate which aspects require specific attention.

## Information on industrial packaging

The website also features a section on the recyclability of industrial packaging. As with the information on household packaging, this section is regularly updated following market developments and new legislation.

## For **additional information** :

If you have a question that is not (sufficiently) answered on the website, you are welcome to ask Fost Plus or VAL-I-PAC directly by sending an e-mail to [prevention@fostplus.be](mailto:prevention@fostplus.be).