

## Introduction to Pallets

### The Wooden Pallet

These unassuming pieces of wood are essential in the smooth transportation and warehousing of goods. Originally developed from a “Skid” – a flat wooden surface where goods could be piled on top and dragged or wheeled along. With the development of Forklift trucks in 1915, the “skid” began its development into the more robust structure that we know today. The first patent being lodged in 1925 by a gentleman called Howard T. Hallowell, who named it a “Lift Truck Platform”.

Today pallets are vital, they can be made from various materials, plastics, metal, recycled material, they can be attached to boxes or shipping containers for example to move liquids and will usually be heat treated when used in international trade. Almost all the items that surround you right now will have been moved at some point using some kind of pallet. These days they are even used for recycling and producing furniture.

### A “Standard” Pallet?

We are often provided with a pallet and packing specification requesting a “standard” pallet. But what does that mean? Is one persons “standard” not quite the same as someone else’s?

Pallet sizes developed independently across the globe, the US Wartime standard of 48” x 48” designed for moving heavy goods and armaments was found to be too wide and required additional aisle space in the warehouses. Different countries began to develop their own “standards”

Here we have a look at some of the terminology used in pallet descriptions:

- A UK Standard Pallet is a pallet that measures 1200 x 1000mm.
- Not to be confused with a European Standard Pallet, 1200 x 800mm.
- Or a US Standard pallet, 48” x 40”.
- 42” x 42” are common “standards” in US and Asia too.

Once we determine the dimensions, then there are more factors to consider.

**UK Grade A (or grade 1)** – a grade A pallet will be good quality, capable of holding up to around 1 tonne of cargo. (A pallet of books will be 550-700 approximately). The pallet will have big wooden blocks and narrower gaps between the top boards. There will also be boards around the bottom edge (base boards) for added stability, these are known as perimeter based. Perimeter based pallets are essential when pallets are going into racking.

**UK Grade B (or grade 2)** – these pallets will still be of good quality, but they will be expected to hold around 700-800 kilos, the boards maybe slightly thinner, with bigger gaps between them. B Grade pallets may be perimeter based, or they may not, (3 legger – when you just see 3 stringers suspended from the top of the pallet).

**UK Grade C (or grade 3 or lightweight)** – these pallets will have widely spaced boards; the boards will be thinner and the blocks smaller or made of chipboard or other composite wood. They are only going to hold between 200-500 kilos and are not suited to moving books.

### European Standard Pallet

- Measures 1200 x 800 mm, and they are very common in the UK market.
- Stamped Euro – If your client requests this, they expect to receive a pallet with the EUR stamp on it. These will be good quality A Grade pallets, and the specification that they are built to will be exact between all manufacturers.

They are designed to be exchanged on delivery. These can be second hand and you may see grade B, in the second-hand market that are a little weathered.

You may see requests for EPAL, UIC, MAV, etc. EUR pallets. These are brands of pallets which tell you where they were made. They may also be treated.

- Unstamped Euro – will be the right size, will be lightweight or medium and can vary in quality depending on the distribution and thickness of the boards, whether or not they are perimeter based etc.
- Outside of these definitions there are exceptions, some warehouses have custom made pallets, purpose built to fit their racking system. These pallets are expensive to produce as they will be Grade A but have no value in general circulation. When working with those warehouses regularly, a carrier will often have an arrangement in place to collect empty pallets when they deliver.
- Books are a dense commodity and need good quality pallets with closely spaced boards to avoid cartons tipping into gaps and the boards imprinting into the cartons.

### **Pallet Sizes and Costs**

- There are cost implications for different sized pallets, for example a pallet measuring 1000 x 1000mm wastes space on a vehicle and pushes up the unit cost. Euro sized pallets do not hold as much product and the smaller edge can create more wasted space on a pallet as we cannot get so many cartons on.
- Euro Pallets are most popular for using on trucks. But they don't fit so well in shipping containers. A Euro pallet wastes a full one sixth of the floor space in a 40' ISO container, but they're still popular because they are the only common pallet size that fits through a normal doorway.
- A full trailer can hold 33 Euro pallets on the base, but only 26 UK standard pallets.
- Standard 1200 x 1000 are most popular for shipping in containers as they fit better, are more stable blocks, and waste less space.
- A full 40ft shipping container can hold 21 standard UK pallets on the base, 24 Euros.
- Euro pallets are less suitable for double stacking due to stability issues so we often see on deliveries using Euros that we are unable to double stack pallets, making delivery costs higher.
- As a general rule, the larger the carton the more likely it will be to have more gaps and less utilisation, particularly on the smaller pallets.
- Ikea has even designed goods around pallets, they redesigned their mugs and packing to ensure the best possible stow on a pallet. After the changes it was possible to fit 2204 mugs on a pallet, rather than the original 864, which led to a 60 percent reduction in shipping costs.

### **ISPM15, Treated Pallets for Import and Export**

Solid wooden packaging, including boxes and crates should be free from bark and treated with Methyl bromide, the pallet should then be stamped, to show that it has been done.

This is to prevent spread of disease via Beetles and Insects. It is accepted throughout Europe and many other countries as an effective way to treat pallets including Australia, Brazil and the United States. It is important though to check directly with the country you are working with to ensure that it is acceptable there. There is an additional cost for supplying treated pallets, this should be taken into account when quoting export clients.

Try typing the word "pallet" on Pinterest to see all of the innovative ways the humble pallet can be used. This vital part of the supply chain has many functions.

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