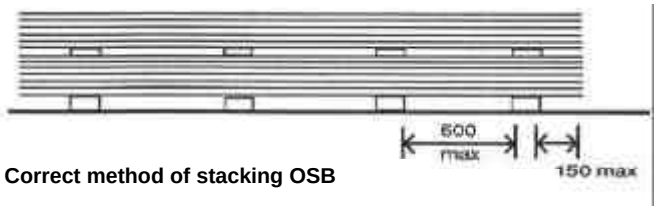
# OSB USER GUIDE

## STORAGE & HANDLING

**General**
OSB - Oriented Strand Board is a structural wood-based panel suitable in a wide range of applications.

OSB is no different from solid wood in that its moisture content will change with changes in temperature and relative humidity. Changes in moisture content will cause the dimensions (length, width and thickness) to change. It is important that the moisture of OSB is as close as possible to its final in-service moisture content at the time of installation.

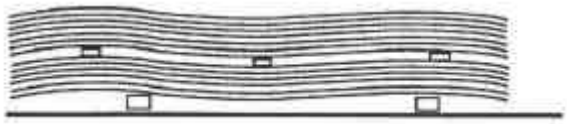
Bad handling and poorly organised storage of OSB can lead to damage, wastage and there is also the potential for injury.



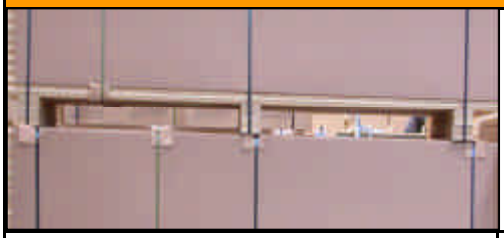

**Correct method of stacking OSB**

**Stacking**
OSB should be stacked flat on a level surface with all four edges flush. Panels should be sufficiently clear of the ground to avoid any splashing from water. The ideal base is a close boarded or slatted pallet. Alternatively, panels can be carefully stacked on battens of equal thickness and at centres not exceeding 600mm.

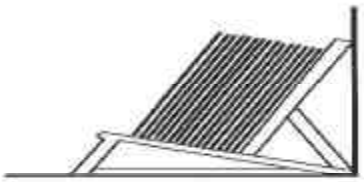
Incorrect stacking is a safety hazard and can lead to deformed and damaged boards. Where palletised stacks are placed on top of one another, bearers should line up to prevent distortion.



**Incorrect method of stacking**



**Thin panels**
It is recommended when stacking thin panels (6mm) that they are supported under the whole area of the panels by a thicker panel (18mm). Intermediate bearers are recommended every 10 to 15 panels to allow thorough ventilation. Overhang of panels at the edges and ends of stacks should not exceed 150mm at any point.



**Stacking on edge**
Where space is restricted panels can be stacked on the edge. Panels should not come into contact with the ground and they must be supported by a purpose made stack.

**Protection**
The top of the stack should be covered with a protective panel to counteract any tendancy for the top panel to warp and to protect the stack from mechanical damage. If stacked outside, panels should be fully protected by a waterproof covering.

**Protection during transport**
OSB should be covered by a waterproof covering during transport to protect against rain and traffic spray.

**Edge protection**
Edge protection should be provided to avoid damage by ropes, straps and other banding. This is particularly important with profiled panels such as tongued and grooved panels.
Where panels are banded, the bands should be cut as soon as practicable after delivery in order to prevent them causing permanent damage to the panels.

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**Handling**

Compliance with the relevant national health and safety recommendations should be maintained at all times when manual handling. Safety shoes/boots and suitable gloves should be worn. A maximum manual lifting weight of 25kg is recommended. In relation to maximum safety lifting weights, some typical weights of OSB are given below.

| Panel Type | Thickness | Typical panel weight (kg) for given panel sizes (mm) | | |
|---|---|---|---|---|
| | (mm) | 2440 x 610mm | 2440 x 1220mm | 3660 x 1220mm |
| OSB | 18 | 17 | 34 | 51 |

**Moisture**

Like other wood-based panel products, OSB is hygroscopic and its dimensions change in response to a change in humidity. Changes in moisture content can lead to dimensional changes that can cause problems, such as bowing, in service, A 1% change in moisture content will typically increase or decrease the length, width and thickness of the different grades of OSB by the amounts set out in the table below.

| Panel Type | Specification | Dimensional change at 1% change in panel moisture content | | |
|---|---|---|---|---|
| | | Length% | Width% | Thickness % |
| OSB | EN 300, OBS/2 | 0,03 | 0,04 | 0,7 |
| | EN 300, OSB/3 | 0,02 | 0,03 | 0,5 |
| | EN 300, OSB/4 | 0,02 | 0,03 | 0,5 |

On leaving the factory, some grades of OSB can have a moisture content as low as 2% although generally it is above 5%.

**Conditioning**

Panels should be conditioned to bring them into equilibrium with the end use environment before fixing. Conditioning is usually achieved by loosely stacking the panels in the room where they will be used prior to fixing them. The time required for the panels to achieve equilibirum moisture content will vary depending upon the panel thickness, temperature and relative humidity in the building. Where panels are dispatched from the manufacturer with a moisture content between 7 - 9%, they should be allowed to condition for at least 48 hours prior to fixing. Where the moisture content is less than 7% or greater than 9% a minimum conditioning period of 96 hours should be allowed, but longer periods may be required depending upon the specific conditions and moisture content of the panels.

The likely equilibrium moisture content of OSB in various conditions is as follows:

In a building with continous central heating: 5-8%
In a building with intermittent central heating: 8-11%
In an unheated building: up to 15%

When components are factory produced for installation on site, it is essential that the site conditions are suitable to receive the components, with wet trades completed and the building dried out.