

MORE FROM WOOD.



Egger OSB HDX

**The lighter, stronger alternative
to 38 mm chipboard.**





“We specify EGGER OSB HDX because of its superior structural properties over chipboard products available for mezzanine floor applications. We needed to achieve a high point loading requirement for the project and the EGGER OSB HDX product allowed us to achieve this. The board performed in all aspects, not only on strength but also how easy it was to handle being lighter than the chipboard we are used to fitting. We will definitely be fitting EGGER OSB HDX in the future to see what other savings can be made but also we hope EGGER OSB HDX can secure more business due to the benefits of the product.”

Anglia Partitions.



What is it?
EGGER OSB HDX is a brand new 30 mm heavy duty, load bearing OSB4 panel.

What environments is it suitable for?
It is the ideal solution for heavy duty load bearing environments such as mezzanine flooring, racking, shelving, working platforms and decking, where 38 mm chipboard would typically be used.

Due to the low swelling properties of EGGER OSB HDX it is suitable for use in humid environments and **less likely than P6 chipboard to pick up moisture** which can lead to uneven floors.

Is it easy to lay?
It has a tongue and groove profile on the 2 long edges and is laid the same way as 38 mm chipboard. However, due to only being 30 mm thick, EGGER OSB HDX is around **20% lighter**.

That’s despite being wider than the typical chipboard panel (675 mm as opposed to the usual 600 mm)

A lighter, wider board means that it is **easier to manoeuvre and quicker to lay**.

Does a thinner board compromise its technical properties?
On the contrary, 30 mm EGGER OSB HDX actually outperforms 38 mm chipboard for:

- Point loads
- Strength
- UDLs
- Stiffness

Therefore potentially floors could be designed to take **higher loads**, or use **fewer joists**, providing the **opportunity for significant savings**.

The table below shows the differences between EGGER OSB HDX and P6 38 mm chipboard

Properties	EGGER OSB HDX (30 mm)	P6 38 mm Chipboard
Bending strength	25 N/mm²	15.8 N/mm²
Modulus of Elasticity (stiffness)	7000 N/mm²	2770 N/mm²
Safe long term point load over 600mm	5.4 kN	4.7 kN
Safe long term point load over 800mm	4.4 kN	4.0 kN
Safe long term UDL over 600mm	27.8 kN/m²	17.7 kN/m²
Safe long term UDL over 800mm	15.6 kN/m²	7.5 kN/m²

Determined according to EN 12871/ EN 1995, service class 1 conditions. Limited by deflection of span L/200, according to permanent/working load ratio.

- **EGGER OSB HDX; The benefits over 38 mm chipboard:**
- Higher point loads and UDLs
 - Stronger and stiffer
 - Around 20% lighter
 - Quicker to lay

Dimensions: 2400 x 675 x 30 mm
(other lengths may be available upon request)

NB: EGGER OSB HDX should be laid at right angles to any support.

Design considerations

EGGER OSB HDX meets and exceeds all of the requirements in the table below:

Board type according EN 300 / Z-9.1-566 (DIBt)

Mechanical Properties	Standard	Unit	Requirement
Board Thickness			30mm
Density	EN 323	(kg/m³)	≥600
Internal bond	EN 319	(N/mm²)	≥0.30
Internal bond after boiling test	EN 300AA	(N/mm²)	≥0.08
Bending strength major axis	EN 310	(N/mm²)	≥29
Bending strength minor axis	EN 310	(N/mm²)	≥16
Modulus of elasticity major axis	EN 310	(N/mm²)	≥5000
Modulus of elasticity minor axis	EN 310	(N/mm²)	≥2100
Swelling in thickness 24h	EN 317	(%)	≤10
Moisture content*1	EN 322	(%)	2-12
Sanding grade			Grade 100
Formaldehyde content*2	EN 120	(mg/100g)	≤2.0

*1) When dispatched

*2) Perforator value according to EN 120 according "DIBt- recommendation 100" from June 1994 are the allowed values:
half year average value: 6.5mg HCHO/100g abs. dry board.
single value: 8.0mg HCHO/100g abs. dry board.



General maintenance and cleaning

A stiff brush/broom and damp mop/cloth should be sufficient to clean the product.

Storage

EGGER OSB HDX should be stored in a dry enclosed building, off the ground, preferably on at least 3 equidistant bearers to allow air to circulate.

Loading information

To design and detail your specification accordingly please note that Annex K of BS5268-2:2002 dictates the method of assessment of deflection under various loading periods and defines the limit of such deflections. Accordingly the loadings in the tables are limited by deflections of the board to span/200 and span/300 under long term dead plus live loading.

Manufactured in accordance with EN300-6:2006 EGGER OSB HDX it is suitable for heavy duty load bearing floors in a dry or humid environment, such as for decking and mezzanine floors, shelving and racking.

Independent performance testing acc. to EN 12871 has confirmed best point load capability.

Uniformly distributed load

Based on testing acc. to EN 789 and EN 1058 specific characteristic values have been determined for EGGER OSB HDX using modifications factors detailed in Eurocode 5, EN 1995-1-1:2010. The values always consider bending and deflection limit as fulfilled.

Safe Long Term UDL uniformly distributed load – double span (kN/m²)

		CC span					
OSB HDX		Service Class	400 mm*	480 mm*	600 mm	800 mm	1200 mm
Strength limit		SC1	47.5	33.0	21.0	11.7	5.1
Deflection limit	L/200	SC1	90.0	53.0	27.8	15.6	3.3
	L/300	SC1	61.0	35.5	18.0	7.6	2.1

*Please note that values for cc-span 400mm and 480mm in safe long term UDL are based upon estimated calculations (acc.to B.Wissmann;Univ Hannover, 2013).

Concentrated loads

Adequate provision should be made for static and dynamic effects of concentrated loads such as wheel loads and racking systems. Spreader plates should also be provided if necessary to transfer permanent loads to the supporting structure such as storage tanks and guard rail posts.

Safe long term point load (kN)

		CC span			
Service Class		400 mm*	480 mm*	600 mm	800 mm
SC1		5.9	5.6	5.4	4.4
SC2		4.8	4.5	4.3	3.5

Determined acc. to EN 12871/EN 1195.

*Please note that values for cc-span 400mm and 480mm in safe long term point loads are based upon estimated calculations (acc.to B.Wissmann;Univ Hannover, 2013).

Safe medium term point load (kN)

		CC span			
Service Class		400 mm*	480 mm*	600 mm	800 mm
SC1		8.0	7.8	7.6	6.2
SC2		6.4	6.2	6.0	4.9

Determined acc. to EN 12871/EN 1195.

*Please note that values for cc-span 400mm and 480mm in safe long term point loads are based upon estimated calculations (acc.to B.Wissmann;Univ Hannover, 2013).

Hand pallet trucks

- For 1.0 tonne pallet truck; use up to a maximum of 800 mm joist centres.
 - For 1.5 tonne pallet truck; use up to a maximum of 480 mm joist centres.
- The above loads are permissible assuming the load on no one wheel or bogie exceeds the maximum loading described.
- Note: The isolated detachment of strands from the OSB surface by driving with pallet trucks will not affect the viability of the boards.

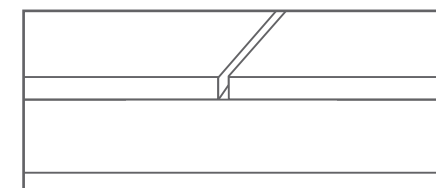


“Our fitters were extremely happy with the performance of the new EGGER OSB HDX product. They found the panels easy to handle over what they normally use, were surprised how light in weight the product was given the product structural properties are superior and how well the boards fitted together. They were able to complete the installation quicker using this product and are keen to use EGGER OSB HDX on future projects!”

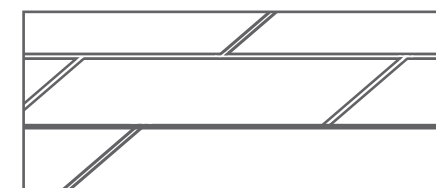
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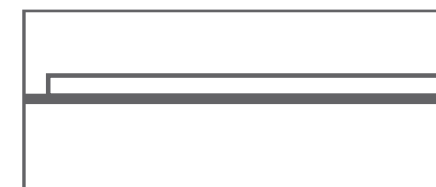
Installation instructions



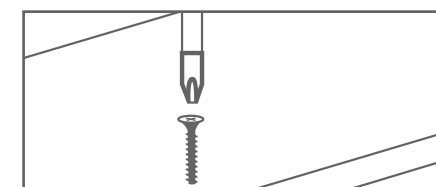
1. EGGER OSB HDX boards should be laid with the longest edges at right angles to the joists so all short end joints land on a joist. Where this is not the case, refer to local building authority guidelines.



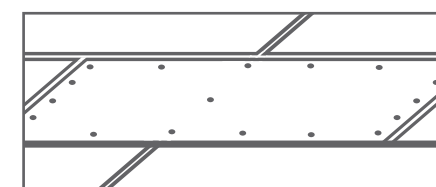
2. Joints should always be staggered in a brick bond fashion, with the perimeter of the floor continuously supported.



3. An expansion gap of 10 mm or 2 mm per metre run (whichever is greater) should be provided to the floor perimeter and against all walls and abutments. For floors which are in excess of 10 m long, intermediate movement gaps should be incorporated and finished with a compressible filler or proprietary movement joint cover.



4. Fastenings should be made not less than 25 mm from the board edges. All boards must be securely fastened to each joist or noggin with a fixing of a size and type suitable for the design of the supporting joists. For example, if fitting boards on a metal frame it would be advisable to use 50 mm, 12 gauge self-tapping screws. Alternatively, if boards are being fixed to timber joists it would be advisable to use No. 8 screws, at least 60 mm in length.



5. Fasteners should be spaced around the perimeter of the board at one fixing per joist and then add a single fixing per joist in the centre of the board.

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