



TABLE OF CONTENTS	page
EGGER OS'Floor™	04
Technical properties	05
EGGER delivery programm	05
User manual for EGGER OS'Floor™	06
Standards & Certifications	06
System solutions for timber construction	07
About EGGER	12



# EGGER OS'FLOOR™

#### WHAT IS EGGER OS'FLOOR™?

**EGGER OS'Floor™** is a high quality proven performer, moisture resistant, innovative and environmentally sustainable, structural panel designed and manufactured specifically for construction applications.

**EGGER OS'Floor™** was developed from EGGER OSB 4 TOP flooring panels for world wide use and **provides more than 15 years experience in construction with Oriented Strand Board (OSB)**.

**EGGER OS'Floor™ H2** is a termite treated OS'Floor panel to H2 level complementing your fully termite treated framing package. **For use North and South of the Tropic of Capricorn.** 

#### **BENEFITS OF EGGER OS'FLOOR™**

#### **Environmentally friendly**

- Formaldehyde free bonding for ultra low emission < 0,06 mg/l F\*\*\*\* JAS, E0
- Supports a healthy indoor climate
- Certified OSB mill according to PEFC scheme and European Timber Regulation (EUTR)

#### Fast and easy handling

- Marked nail grid on the top face for a fast and easy installation
- Major axis marked on the surface
- Edge sealed asymmetric T&G profile

#### **Health and Safety**

- Lightweight board
- Proven slip resistance of OSB according German slip resistance R11
- Easy to handle

#### **Superior product properties**

- Performance is greater than required for strength and stiffness properties on major axis
- Dimensionally stable product due to OSB technology and panel composition
- Edge swelling protection through vacuum wax sealing

### Certified by UTS and Law Sue Davison Ltd N.Z.

- Fit for purpose according to AS/NZS 1860.1
- Continuous third party testing through independent notified body in EU (e.g. WKI)
- Hard wearing exposure tested by SCION New Zealand











# EGGER OS'FLOOR™ - Performance you can rely on

#### **MADE IN GERMANY**

**EGGER OS'Floor™** is a three-layered, flat-pressed EGGER OSB panel of oriented strands.

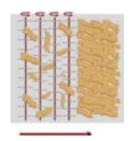
The panel is made of peeled round softwood from sustainable managed forests. Separate strand processing for the core and surface layers, special strand geometry and a high level of orientation of the surface strands in the direction of the wood fibre optimizes EGGER OS'Floor™'s structural performance and physical appearance.

**EGGER OS'Floor™** is a 100 % **formaldehyde free** resin bonded wood-based panel providing strength and durability in humid conditions (class 1) and ultra low emission for best indoor applications. Accredited independent Testing Laboratory WKI Braunschweig, Germany, undertakes third party auditing of factory production control according to EN 300 − OSB in conjunction with EN 13986:2004- Wood based panels for use in construction and German Approval DIBt Z-9.1-566.









#### **MADE WITH EXPERIENCE**

The **EGGER OS'Floor™**-production in Wismar (Germany) is one of the most modern European plants. EGGER permanently invests in staff education and state of the art technology.







OSB line - ring knife flaker



OSB mat forming



OSB Conti-Press



OSB Star cooler



Quality control - physical testing



Quality control - visual grading



Indoor storage

# **TECHNICAL PROPERTIES**

Properties	Test method	Unit	Major axis (0°, II)	Minor axis (90°,⊥)	Class 1 AS/NZS 1860.1
Formaldehyde emission	JAS dessicator	mg/L	<0.06		E1 ≤ 1.5
Modulus of rupture (MOR)	EN 310 / AS/NZS 4669	MPa	31	18	19
Modulus of elasticity (MOE) EN 310 / AS/NZS 4669		MPa	5200	2300	2750
24h swelling ratio SCION test report	EN 317 / AS/NZS 4669	%	≤ 8		≤ 8
Internal bond (IB) Manufacturers mean	Υ FN 310 / Δ\$ / N/\$ / 660 MPa 0.80		80	0.55	
Thermal conductivity $\lambda_{R}$ DIN 4108-3		W/mK	0.13		n.a
Reaction to fire	AS 3837 / EN 13501-1		Class 3 / D <sub>fl</sub>		n.a
Dimensional change at 1% EN 318		%/%	0.02	0.03	n.a

## **DELIVERY PROGRAM**

#### EGGER OS'FLOOR™

Thickness [mm]	Length x Width [mm]	Weight per panel [kg]	Edge	Surface	Edge treatment	Covered area [m²]
18	2700 × 905	approx. 27,2	T&G	unsanded	gray wax sealer	2.43
18	2250 × 675	approx. 15,2	T&G	unsanded	gray wax sealer	1.35
21	2400 × 905	approx. 28,3	T&G	unsanded	gray wax sealer	2.17

#### EGGER OS'FLOOR™ H2 TERMITE TREATED

Thickness [mm]	Length x Width [mm]	Weight per panel [kg]	Edge	Surface	Edge treatment	Covered area [m²]
18	2700 × 905	approx. 27,2	T&G	unsanded	gray wax sealer	2.43
18	2250 × 675	approx. 15,2	T&G	unsanded	gray wax sealer	1.35
21	2400 × 905	approx. 28,3	T&G	unsanded	gray wax sealer	2.17

# **USER MANUAL FOR EGGER OS'FLOOR™**

#### **STANDARDS & CERTIFICATION**

**EGGER OS'Floor™** was successfully evaluated by access UTS Sydney, Prof. Keith Crews for use as structural flooring based on testing by SCION (NZ) in 2012 and 2013, WKI Braunschweig (DE) and DTI Taastrup (DK) in the framework of the German approval 7-9.1-566:

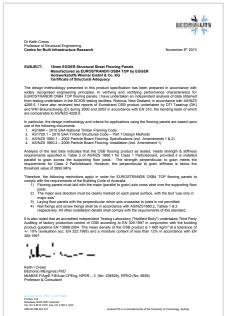
"... Analysis of the test data indicates that the OSB flooring product as tested, meets strength & stiffness requirements specified in Table 3 of AS/NZS 1860.1 for Class 1 Particleboard, provided it is installed parallel to grain across the supporting floor joists.

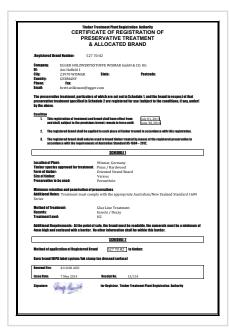
The strength perpendicular to grain meets the requirements for Class 2 Particleboard. However, the perpendicular to grain stiffness is below the threshold value of 2650 MPa."

Therefore EGGER OS'Floor™ has to be installed as follows to meet the requirements of the Building Code of Australia:

- EGGER OS'Floor™ must be laid with the major (parallel to grain) axis across the supporting floor joists
- 2. The major axis direction must be clearly marked on each EGGER OS'Floor™ panel surface, with the text "use only in major axis"
- **3.** Laying floor panels with the perpendicular minor axis along the joists is **not** permitted.
- **4.** Nail fixings and screw fixings shall be in accordance with AS/NZS 1860.2, Tables 1 & 2 respectively.
- **5.** All installation details shall comply with the requirements of AS/NZS 1860.2.







All certificates can be downloaded from the EGGER homepage www.egger.com/osfloor

**EGGER OS'Floor™** 18 mm to span 450 mm and 21 mm to 600 mm span. As floor loads will depend on use and the nature of occupancy, refer AS/NZS 1170.1.

EGGER OS'Floor™ shall be installed in accordance with government building regulations and AS/NZS 1860.2.

**EGGER OS'Floor™** may be used for residential and light commercial or industrial purposes, in accordance with the standards AS 1684, Wood products Framing Code or NZS 3604 Timber-framed buildings. In commercial or other applications involving increased floor loads, reference should be made to AS/NZS 1170.1, Dead and Live Loads and Load combinations.

# CONSTRUCTION RECOMMENDATIONS

#### **SUB-FLOOR CONSTRUCTION**

**EGGER OS'Floor™** may be used over wood products or metal floor framing systems. For best results with wood product frames, deep floor joists (150 mm or more) such as those used in upper storey construction, should be seasoned and gauged. Floor joists shall be securely fixed to bearers. Top edges of the joists must be correctly aligned to provide a flat level surface.

The supporting frame shall comply with AS 1720.1, SAA Wood products Structures Code, NZS 3604, Timber-framed buildings, or be certified by a professional engineer, as required by the building authority.

#### WEATHERING DURING INSTALLATION

Whenever possible, exposure to the elements should be limited by suitable measures and should be covered as soon as possible.

**EGGER OS'Floor™** will withstand up to 3 months outdoor exposure without effecting the structural performance.

EGGER OS'Floor™ properties may be affected by moisture saturation and/or exposure to sub-zero temperatures.

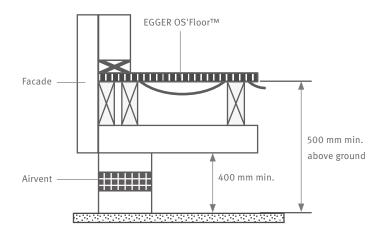
During the exposed period, do not allow water to pond on the surface. Remove water by sweeping and drilling small holes (Ø 6 mm) adjacent to plate lines approx. all 600 mm.

Do not directly cover panels with sheeting or apply liquid sealers to avoid moisture trapping.

#### **SUB-FLOOR VENTILATION**

**EGGER OS'Floor™** and sub-floor framing members should not be subjected to prolonged dampness increasing the moisture content greater 18 percent EMC (Equilibrium Moisture Content) or 21 percent EMC for EGGER OS'Floor™ H2.

- Ventilators to external and internal sub-floorwalls shall be evenly spaced and allow a clear cross-flow of air beneath the floor. Special attention should be given to corners and sub-floor spaces with occasionally higher dampness.
- The underside of the flooring facing the ground should not be coated with sealant. Ventilation to sub-floor should always comply with regulatory requirements.
- Free space between ground level and floor shall be minimum 400 mm. PE plastic sheet ≥0.2 mm (minimum) ground cover is recommended to retard the rise of moisture vapour. Fixing by a layer of gravel is recommended.
- The BCA and AS 3660.1: Termite Management; stipulates that for construction where termite inspection is required, a minimum 400 mm height from ground surface is required. On sloping sites, 400 mm clearance may be reduced to 150 mm within 2 metres of external walls.



#### **INSTALLATION GUIDE**

#### **Recommended span:**

**18 mm** panel thickness: max. 450 mm for point loads in

domestic and some residential

building.

**21 mm** panel thickness: max. 600 mm for point loads in

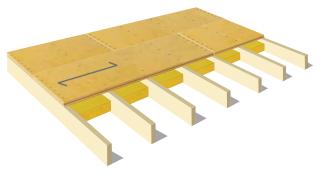
domestic and some residential

building.

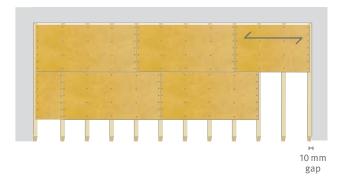
- EGGER OS'Floor™ tongue & groove can be used in platform and fitted floor constructions.
- Panel thickness shall be chosen according to centrecentre-distance of the laid joists.
- Marked "Major use axis" shall be laid always across the floor joist.

- The sheet surface carrying span information and nail grid is placed face up.
- Panels shall be laid with stacked end joints (brickwork pattern) **no cross-joins are permitted**.
- The individual sheet lengths should cover at least two floor joist spacings. If single span cut-in-panels are required, a trimmer (min. 70 x 35 mm) must be fixed between the joists to support the middle of the panel.
- Construction grade adhesive is applied to the upper surface of joist members prior to sheet placement (see Adhesive Application (see Use of Adhesive).

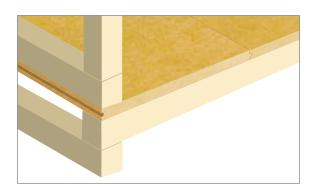




#### Fitted floor installation



#### PLATFORM CONSTRUCTION

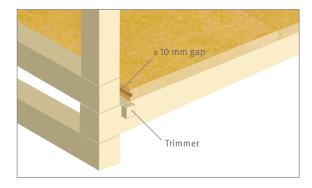


**EGGER OS'Floor™** is particularly suited to platform construction.

**EGGER OS'Floor™** sheets edges are aligned with the outside external wall frames at the building perimeter.
Wall components are installed over the EGGER OS'Floor flooring or fixed through the sheets to the joists.

**EGGER OS'Floor™** allows elimination of fixing of trimmers except at square edged joints. Square edges joints within a room must be supported on joists or trimmers.

#### FITTED FLOOR INSTALLATION



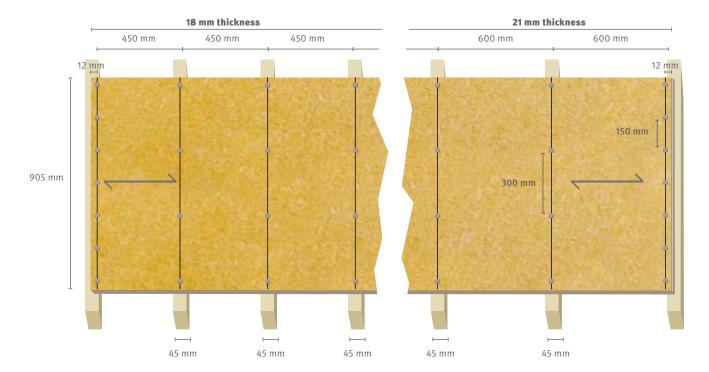
**EGGER OS'Floor™** is layed as fitting floor up to installed wall frames laying the marked "Use axis" rectangular to the floor joist with each edge supported on joist or trimmer.

Minimum 10 mm expansion gap shall be provided between flooring edges and wall frames. Skirtings fastened to the wall frame must allow ventilation of the floor space.



## **NAIL GRID MARKING**

Marked nail grid on the top face of the panels allows fast fixing along the floor joist. Nailing distance from the panel edge should be  $\geq 12$  mm.



#### **FASTENERS AND FASTENER SPACING**

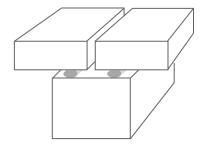
Select an appropriate fastener from the table or refer to AS 1860.2, table 1 or NZS 3604, table 7.5. The fastener type, length and gauge is based on the flooring thickness, joist material and available fastening equipment. Use fasteners in conjunction with adhesive. At sheet perimeter spacing of fasteners is 150 mm centers. In the field space at 300 mm centers. Keep fasteners at least 10 mm from square edges and at least 20 mm from T&G edges.

Fastening method	Joist material	Fastener type	EGGER OS'Floor™ thickness	Minimum fastener size	
Manual nailing	Hardwood or cypress	Bullet, jolt or flat head nails	18 mm	AU: 50 mm × 2.8 mm NZ: 60 mm × 2.8 mm	
	pine	buttet, joit of flat flead flatts	21 mm	65 mm × 3.75 mm	
	Softwoods	As above	18 mm, 21 mm	65 mm × 2.8 mm	
Pneumatic nailing	Pneumatic nailing All timbers T or f		18 mm, 21 mm	AU:50 mm × 2.5 mm NZ: 65 mm × 2.8 mm (recomm.)	
Screw fixing	All timbers	Countersunk head, self drilling screws	18 mm, 21 mm	No. 10 × 50 mm	
	Steel (1.2mm minimum)	Countersunk, self embedding head, self drilling screws preferably with self breaking cutter nib	18 mm, 21 mm	No. 9 or 10 × 45 mm	

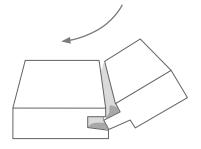
Sheet size [mm]	Edge profile	Covered area [m²]	Joists at (mm) centres	Number of fasteners per sheet	Number of fasteners per 100 m <sup>2</sup>
2700 × 905	T&G2	2.43	450	34	1400
2250 × 675	T&G2	1.35	450	19	1400
2400 × 905	T&G2	2.17	600	26	1198

#### **USE OF ADHESIVE**

- Construction grade adhesives should be used with nail or screw fixings.
- Surfaces which are to be bonded must be clean and dry.
- Positioning of the panels must be done according to the curing time given by the adhesive manufacturer.
- Nail or screw flooring to joists within 15 minutes of positioning sheets.
- Remove excess adhesive from sheets.



Gluing of square edge joint



Tongue and groove gluing

#### **SURFACE FINISH**

**EGGER OS'Floor™** should be prepared depending on the type of covering or finish and the effects of weather exposure on the floor. Preparatory work should only be undertaken when the building is closed and weather tight.

**EGGER OS'Floor™** which has been wet during construction, must be allowed to dry.

**EGGER OS'Floor™** must be checked before being fixed tightly to flooring joists. Prior to sanding (if required), fasteners shall be driven 2mm below the floor surface to facilitate sanding and minimize nail popping in the event of subfloor shrinkage. For general purpose sanding use 80 grit. Heavier sanding, with

maximum 60 grit paper, may be required on floors, which have been exposed to severe wetting. Avoid excessive sanding and limit to a 1.0 mm maximum cut over general floor areas, 1.5 mm maximum cut over supported sheet joints.

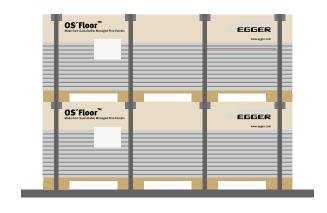
**EGGER OS'Floor™** should be fine sanded with 100 grit closed coat paper for clear and tinted paint finishing.

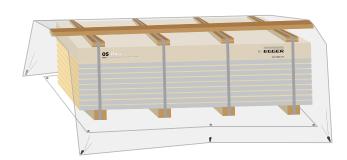
After sanding, vacuum cleaning is required. The sanded surface must be dry, clean and free of any surface contamination, i.e. paint, oil, etc.

#### HANDLING AND STORAGE

Correct storage and protective measures during transport are essential for problem-free handling. The following simple principles should be taken into account:

- EGGER OS'Floor™ panels should be stored in a dry area flat on bearers. The span width should be no greater than 700 mm and the bearers should all be the same height. If several pallets are stacked on top of each other then the bearers should be aligned.
- When stored outside provide clear space from the ground and use waterproof covers on wooden battens providing air circulation around the flooring product.
- In the case of transport by forklift the bearer chosen must be sufficiently high to prevent damage.
- Before using the boards, a 48-hour conditioning period is recommended to allow the wood to acclimatise to local humidity.











# EGGER – SYSTEM SOLUTION FOR TIMBER CONSTRUCTION

Architects, Builders and Home owners appreciate the beauty, flexibility and advantages of using wood as a building material. Engineered wood products and system solutions made by EGGER fulfill these expectations.

# EGGER OS'BRACE® AND EGGER OS'BRACE® H2 BLUE -THE ENVIRONMENTALLY-FRIENDLY 6 MM BRACING PANEL

Since 2005 EGGER OS'Brace® (6 mm )is a ■ Engineered and tested EGGER well-established innovative and environmentally sustainable, structural bracing panel designed and manufactured specifically for the Australian building and construction industry.

- Strong and durable, engineered wood bracing panel with consistent structural properties
- Clean fresh wood appearance without knots and holes
- OS'Brace® system complying with the performance requirements of the National Construction Code (NCC) incorporating the Building Code of Australia (BCA)
- Available with H2 termite treatment: H2 Blue treatment is effective against termite species in Australia both North and South of the Tropic of Capricorn
- Environmental Product Declaration (EPD) acc. to ISO 14025 available



For further information on EGGER OS'Brace® please check www.egger.com/osbrace

#### EGGER TIMBER - MGP GRADED

Excellent technical parameters – that is what EGGER timber stands for. The foundation to this is laid by the European whitewood (Picea abies) and European redwood (Pinus sylvestris) from sustainable managed domestic and PEFC certified forests. Regular strict audits by an independent third party (e.g. HFA - Holzforschung Austria) make EGGER timber a premium quality product.

- Available as studs and dimensions
- MGP 10/12 graded according to AS 1748
- Visual graded F5/F8 according to AS/ NZS 2858 for all sizes
- Environmental Product Declaration (EPD) acc. to ISO 14025 available



For further information on EGGER timber please check www.egger.com/timber

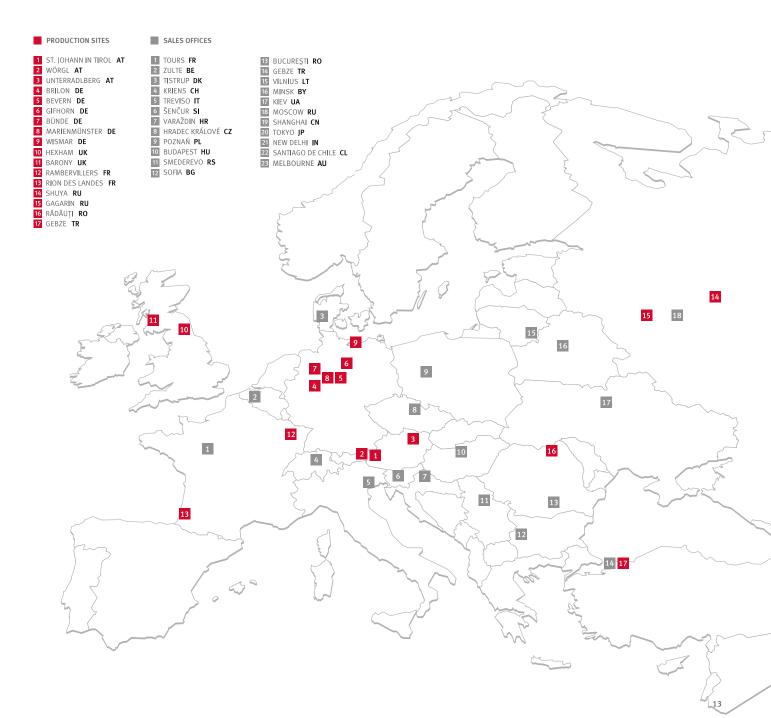
#### **EGGER - THE EUROPEAN OSB PLANTS**

The EGGER group is a 100% family-owned business. Since its inception in 1961 in St. Johann i.T., Austria, EGGER has become a leading manufacturer of wood-based products in Europe. Today, EGGER has 17 plants in 7 European countries, about 7,200 employees, sales offices in all major industrial nations and a global sales and distribution network serving over 85 countries worldwide.

Wismar (Germany) and Rădăuţi (Romania) are Europe's most modern production sites for EGGER OSB, OS'Brace® and OS'Floor™. Wismar has direct access to the Baltic port. Both plants are linked with perfect logistic access to rail and truck and are surrounded by sustainably managed forests.







#### **ENVIRONMENT AND SUSTAINABILITY**

WE ORIENTATE OURSELVES TOWARDS THE FUNDAMENTAL IDEA OF SUSTAINABILITY BECAUSE WE KNOW THAT OUR ACTIONS TODAY DETERMINE THE QUALITY OF OUR FUTURE LIVING ENVIRONMENT. AS A CONSEQUENCE WE GAVE IN OUR MISSION STATEMENT THE HIGHEST PRIORITY TO THE SUSTAINABLE USAGE OF RAW MATERIALS.

Therefore we depend upon fully integrated plants where we substantially utilise wood. This principle is used in the timber production as well as in the production of chipboards, MDF-boards, wood-based products in general and laminate Floorings.

Residual wood and recycled timber which cannot be used in the production are burned in our own biomass power plant and transformed into energy for the production process. In this way we utilise the re-usable material in an optimal climate-friendly manner.

In our ecological cycle we have given consideration to all processes

and to our philosophy. An essential contribution to a healthy and complete living environment is the reduction of greenhouse gases in the atmosphere.

Wood products which we use do have a clear advantage regarding climate change: they are carbon dioxide neutral, because through the process of photosynthesis, carbon dioxide is bound in the wood.

By the substantial and thermal utilisation of wood, we are contributing to the reduction of the climate-damaging greenhouse gas carbon dioxide.

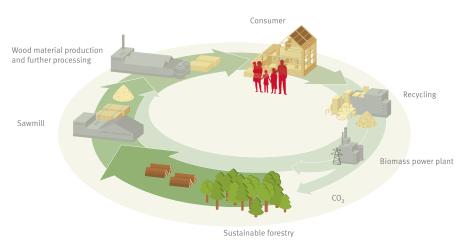


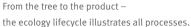


#### FROM THE TREE TO THE PRODUCT - A CLOSED CYCLE

The closed life cycle of wood-based products is in the centre of our activities. In our mission statement we have defined the sustainable use of raw materials the highest priority. From the initial stages of obtaining the raw material through to the utilisation of our energy efficient processing methods and energy generation to the transportation of the finished goods, we always take the well being of the people and environment into consideration.

Wood residues and recycled wood that cannot be used in production is utilised as thermal fuel in our biomass power plants. Through this, EGGER makes "more from wood" and substantiates this by Environmental Product Declarations (EPD) according to ISO 14025 for the whole product range of woodbased panels including OSB.





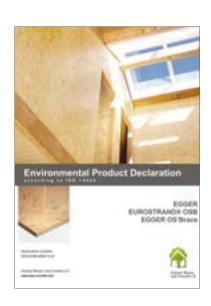




# WHAT ARE ENVIRONMENTAL PRODUCT DECLARATIONS (EPD'S)?

EPDs (Environmental Product Declarations) encompass all the environmental information about a product in one document. Completeness and accuracy is verified and confirmed through an independent expert committee. The EPDs contain a comprehensive description of the product and the manufacturing process, the ecological balance sheet, as well as certifications that are necessary for the application of the product. Ecological balance sheets describe the environmental influences of products in the form of performance figures. These form the basis of the sustainability evaluation of buildings over their total lifecycle, from the manufacture of the product, through its application and up to its waste disposal.

A full version of the EPD is available at www.egger.com/environment



EGGER Holzwerkstoffe Wismar GmbH & Co. KG Am Haffeld 1 23970 Wismar Germany T +49 3841 301- 0 F +49 3841 301-20222

info-wis@egger.com

EGGER Sägewerk
Brilon GmbH
Im Kissen 19
59929 Brilon
Germany
T +49 2961770 - 230
F +49 2961770 - 630

info-esb@egger.com

SC EGGER România SRL
Str. Austriei 2
PO Box 38
725400 Rădăuţi, jud. Suceava
Romania
T+40 372 438000
F+40 372 468000
info-rau@egger.com

# www.egger.com/osfloor

EGGER AUSTRALASIA
PTY LTD
PO Box 697
Carlton South 3053 Victoria
Australia
australia@egger.com

available from: