

Structural acoustic engineered wooden flooring technical data sheet wood element May 2024 *to check if you have our latest sheet visit tier-global.com/download*



Description	Tongue and groove engineered plank with a REGUPOL acoustic layer bonded within for superior coverings on a range of subfloor surfaces
Wood species:	European oak, prime/rustic
Finish:	White oak
Approval:	FSC 100%, anti-slip
Lengths:	Random 450–2400mm (average 1800–2400mm)
Profile:	Tongue and groove on all edges, and 1mm bevel to long sides.
Finished:	Filled and sanded P120 / bespoke finish
Construction:	4mm oak wear layer, 18mm multi-layer birch or okoumé plywood and 3mm REGUPOL Sonus 3 Eco acoustic centre layer (18db reduction)
Lamination:	Hydraulic cold press
Glue line:	D4 moisture curing polyurethane adhesive
Norm:	DIN EN 13489: 2002 Multilayer Flooring
Reaction to fire:	Dfls1
Density:	685 Kg/m ³ 370-720 Kg/m ³ acoustic content (see below specific sheets)
Formaldehyde emissions:	Class E1 zero emissions
Warmth conduction:	15mm-0.091 W/m ² K (Please refer to additional REGUPOL® readings below)

Site conditions: 45–65% relative humidity and 18–20°C room temperature – where underfloor heating is used, do not exceed 27°C

Good resistance to UV, chemicals, weather conditions, aging and plasticisers

Temperature resistance: -40 °C to +110°C

Installation method: Where spanning of joists or battens and cradle systems, use structural 22mm TIER structural floor including 3mm Regupol layer and a span of up to 600mm centres. Boards should be secret nailed to joists/battens below the acoustic layer. Please take exact advice per project from our specialist team.

Underfloor heating: This product is compatible with underfloor heating. Temperature resistances listed above.

Cleaning method: Ensure you use the correct Tier Global cleaning materials. Please check our website for the correct cleaning solution to use on TIER acoustix floors. Do not clean wood flooring with water alone as this will create a high risk of surface coating failure. Clean away any residues on the floor quickly.

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Guarantee: Tier Global guarantees to investigate any complaints reported within two years from the date of sales invoice. In the event of a valid claim, Tier Global will provide replacement materials free of charge.

The lifetime of our guarantee covers the structural integrity of the product being the production, dimensions and grading of the timber element of the board. For pre-finished floors our guarantee also covers the surface finish will adhere correctly to the boards and will not wear through for general residential use, when a preventative cleaning and maintenance programme is in use.

Wood is a natural product and will expand and contract throughout the four seasons, during these seasons you may experience some natural movement which is not a product defect and is not covered by this guarantee.

As a general guideline, the ambient room temperature should be maintained between 15 and 25°C and humidity levels between 45 and 65%. To maintain these humidity levels we would recommend using a humidifier/dehumidifier. Our guarantee is subject to your room conditions being maintained in accordance with British Standards 8201 current recommendations.

Tier Global maintenance products should be used to maintain the warranty (samples available).

All complaints are to be reported in writing by post or email to info@tier-global.com within 48 hours of the issue becoming visible, to allow us to investigate the cause and extent of the problem. Our guarantee is subject to our terms and conditions.



Description	REGUPOL Sonus 3 Eco is a tough, resilient, low cost acoustic underlay that has been developed to attenuate impact sound beneath a wide range of floor finishes, including carpet, wood, laminates and tiles in concrete construction. REGUPOL Sonus 3 Eco is not recommended for use in timber constructions. Extremely durable, flexible and sustainable, REGUPOL Sonus 3 Eco delivers cost effective impact sound insulation and is ideal for all types of developments.	Physical information Material thickness: 3mm and 4.5mm Material construction: Rubber/cork Technical data Density: approx 470kg/m3 Tensile strength (DIN 53571): approx 0.6N/mm2 (3mm thick) Elongation at break (DIN 53571): approx 18% Temperature resistance: -40°C to +110°C Thermal conductivity: approx 0.085W/mk Impact sound insulation ΔLW: 18dB Tier Global reserves the right to modify the content of technical data sheets without prior notice.
Benefits	Designed for use with a wide range of floor finishes, including carpet and tiles as well as wooden based floor finishes, e.g. parquet Offers long term performance without collapse or “bottoming” out under high point loads Resistant to ageing and deformation Zero global warming potential (GWP) and zero ozone depletion potential (ODP) Product manufactured using Recycled Materials and 100% recyclable	
Applications	REGUPOL Sonus 3 Eco is popular with developments where effective sound control is essential and budgets must be kept to a minimum. These include: <ul style="list-style-type: none">• Apartments• Education developments• Hotels• Commercial developments• Leisure developments	

Insulated wooden subfloor testing benchmarks – prototype flooring system

Warm up time and benchmark testing

Floor make up

25mm thickness in total, comprising:

- 7 x layers of plywood
- 2mm layer of acoustic membrane (Regupol)
- 3mm lamella – timber finish floor top



Left hand side of the testing rig 10T cable @ 10cm loops (See first picture)

Right hand side of the testing rig 10T cable @ 20cm loops (See first picture)

Powered directly from a 3 pin plug, no thermostat on this test

No insulation underneath system, just carpet tiled floor with a 2.5” gap (see second picture)

Height temperature taken from 70cm from camera to floor (See third picture, camera rig set up)

N.B. Below are the test times and temperatures, for both heat up and cool down periods. Please note these temperatures were taken on a sample floor surface not correctly installed as in common installation circumstances, so heat loss overall would be higher, in comparison to a correctly fitted floor system.

Date: 26/09/2022 HEAT UP COOL DOWN

Time	Start temperature	Temperature	Time	Start temperature	Temperature
12.25pm	16°C				
1.15pm	19/19.5°C				
12.30pm	16°C	1.20pm	19°C		
12.35pm	16°C	1.25pm	19°C		
12.40pm	17°C	1.30pm	19°C		
12.45pm	17°C	1.35pm	19°C		
12.50pm	17°C	1.40pm	19°C		
12.55pm	18°C	1.45pm	19°C		
1.00pm	18°C	1.50pm	19°C		
1.05pm	19°C	1.55pm	19/18°C		
1.10pm	19°C				
1.15pm	intermittent between 19/19.5°C				

Also, as a key indication of efficiency, even with the rig being set up under test conditions and not under normal conditions on how it would usually be installed, the warmup times and temps along with the cool down times and temps are within the expectation of the manufacturer. To gain a more accurate understanding and to obtain more accurate readings we would need to carry out further tests, on a small-scale room fit out, build to standard regulations, and fitted with fixtures more becoming of a standard build.

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