

# SUBDUE® L

## lightweight noise barrier

Subdue® L is a lightweight multilayered noise barrier panel. The panels are constructed from two outer layers of lightweight marine grade hardwood, compliant to BS 1088, with a range of inner cores comprising cork, cork/rubber or crumbed rubber. Subdue L was specially developed to reduce noise transmission and structural vibration in interior applications such as lightweight interior wall, ceiling and floor construction. The product is suited for low privacy areas and can be used in commercial, rail, and marine constructions.

The 'L' category of 'Subdue' panels includes inner cores with densities up to 1000 kg/m<sup>3</sup>. It is available in nominal thicknesses of 14 and 24 mm. Additional thicknesses in between can be produced depending on customer specification.

Coincidence dip is a common phenomenon in lightweight panels, that adversely impacts the sound transmission loss performance in materials such as timber, plywood, sheet metal, low density rigid foams and hollow core walls. Subdue's unique multilayered composition with its inner core layer, reduces the impact of the coincidence dip, thereby maintaining the performance of the panel. Subdue L works by reflecting, absorbing and damping the vibration and transmission of sound through walls and floors, reducing the noise generated from sources such as mechanical equipment, engines and electronic audio devices.

Pyrotek endorses forest sustainability and the preservation of natural environment. We procure highest quality materials from suppliers who hold FSC Certification (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forestry Certification) amongst other certification programmes.

Subdue lightweight marine grade hardwood is tested to AS/NZS 2098.11 and classifies as 'E-0' for low formaldehyde emission.

### SPECIFICATIONS

|               |   |
|---------------|---|
| Core Material | Cork, Rubber  |
| Available     | Standard sheet size:<br>2440 mm x 1220 mm untrimmed*<br>2400 mm x 1200 mm trimmed<br>Okoume plywood (standard),<br>other species available on request<br>depending on MOQ |

\*Untrimmed means some layers may overhang the usable width



### applications

- Used to construct floor, partition walls and lining panels
- Particularly suited in weight sensitive applications
- Low privacy areas such as office partitions and staff quarters
- Extensively specified for interior marine construction e.g. bulkheads, cabin partitions, floating floors
- Flooring systems in the rail industry and motor coach industry to reduce road and track noise
- Fabrication of acoustic doors
- Used in conjunction with an isolation mount to create floating wall, floor and ceiling systems

### features

- Available in a range of lightweight marine grade plywood, tested to BS 1088
- Tested for low formaldehyde emission
- Simple to saw-cut, fabricate and install using conventional woodworking tools
- Tested and proven to have superior damping and sound attenuation properties over standard plywood and similar
- Thin and lightweight panels whilst still possessing high noise reduction properties
- Bonded using water resistant glues, Weather and Boil Proof (WBP) tested, according to BS 1088
- Available in preformed cut panels and varying constructions (offering weight savings) to suit all designs
- Subdue L: product category with core layer densities up to 1000 kg/m<sup>3</sup>



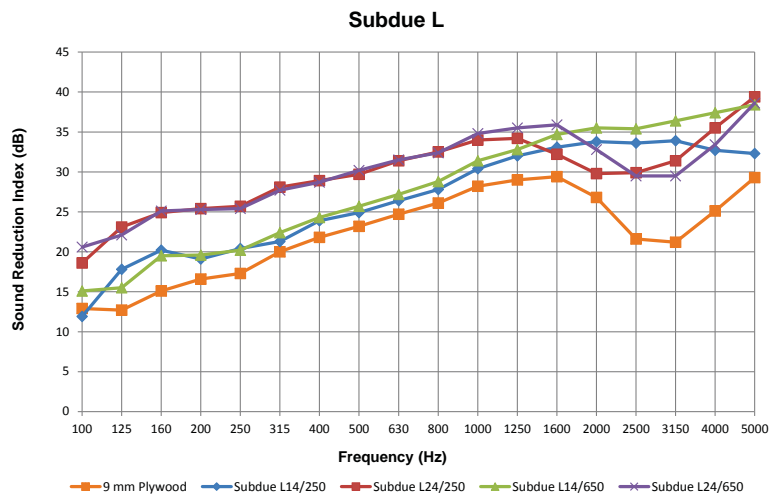
## PRODUCT SPECIFICATIONS

| Grade          | Nominal Total Thickness (mm) | Panel Construction (mm) |      |     | Nominal Weight (kg/m <sup>2</sup> ) | Flexural strength (MPa) ASTM D790 (Report no. 23611PH) | Rw / STC* | Decay rate (dB/s) | Sheet size (mm x mm)      |
|----------------|------------------------------|-------------------------|------|-----|-------------------------------------|--|-----------|-------------------|---------------------------|
|                |                              | Ply                     | Core | Ply |                                     |  |           |                   |                           |
| Subdue L14/250 | 14                           | 4                       | 6    | 4   | 5                                   | 22   | 29/29     | 606               | 2440 x 1220 (untrimmed)** |
| Subdue L24/250 | 24                           | 9                       | 6    | 9   | 10                                  | 26   | 32/32     | 1000              |                           |
| Subdue L14/650 | 14                           | 4                       | 5    | 4   | 7                                   | 26   | 30/30     | 709               | 2400 x 1200 (Trimmed)     |
| Subdue L24/650 | 24                           | 9                       | 5    | 9   | 12                                  | 29   | 32/32     | 1000              |                           |

Tolerances: Directions +5%; Weight: Nominal based on Okoume plywood; \*Refer to Acoustic Performance below; \*\*Untrimmed means some layers may overhang the usable width. Other grades and thicknesses available. Please contact your local Pyrotek representative for more information.

## ACOUSTIC PERFORMANCE

| Frequency (Hz) | 9 mm Plywood | Subdue L14/250 | Subdue L24/250 | Subdue L14/650 | Subdue L24/650 |
|----------------|--------------|----------------|----------------|----------------|----------------|
| 100            | 12.9         | 11.9           | 18.6           | 15.1           | 20.6           |
| 125            | 12.7         | 17.8           | 23.1           | 15.5           | 22.1           |
| 160            | 15.1         | 20.2           | 24.9           | 19.5           | 25.1           |
| 200            | 16.6         | 19.1           | 25.4           | 19.6           | 25.3           |
| 250            | 17.3         | 20.4           | 25.7           | 20.2           | 25.4           |
| 315            | 20.0         | 21.3           | 28.1           | 22.4           | 27.7           |
| 400            | 21.8         | 23.9           | 28.9           | 24.3           | 28.7           |
| 500            | 23.2         | 24.9           | 29.7           | 25.7           | 30.2           |
| 630            | 24.7         | 26.4           | 31.4           | 27.2           | 31.5           |
| 800            | 26.1         | 27.8           | 32.5           | 28.8           | 32.4           |
| 1000           | 28.2         | 30.4           | 34.0           | 31.4           | 34.8           |
| 1250           | 29.0         | 32.0           | 34.2           | 32.8           | 35.5           |
| 1600           | 29.4         | 33.1           | 32.2           | 34.7           | 35.9           |
| 2000           | 26.8         | 33.8           | 29.8           | 35.5           | 32.8           |
| 2500           | 21.6         | 33.6           | 29.9           | 35.4           | 29.5           |
| 3150           | 21.2         | 33.9           | 31.4           | 36.4           | 29.5           |
| 4000           | 25.1         | 32.7           | 35.5           | 37.4           | 33.4           |
| 5000           | 29.3         | 32.3           | 39.4           | 38.4           | 38.6           |
| Rw             | 25           | 29             | 32             | 30             | 32             |
| STC            | 25           | 29             | 32             | 30             | 32             |



Tested to ISO 15186-1:2003 & 10140-4:2010 at University of Canterbury, New Zealand  
Report Number: 222a

Tested with Okoume Plywood

## PRODUCT CODE NOMENCLATURE



For further information and contact details, please visit our website [pyroteknc.com](http://pyroteknc.com)

Caveats: Specifications are subject to change without notice. The data in this document is typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic, mechanical and fire engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See [pyroteknc.com/disclaimer](http://pyroteknc.com/disclaimer).

