

SUBDUE® LH

lightweight noise barrier

Subdue® LH is a lightweight multilayered noise barrier panel. The panels are constructed from two outer layers of dense plywood encapsulating a lightweight cork interlayer. Subdue LH was specially developed to reduce noise transmission and structural vibration in interior applications such as lightweight floor constructions. The product is suited for high privacy areas and can be used in industries such as rail and commercial.

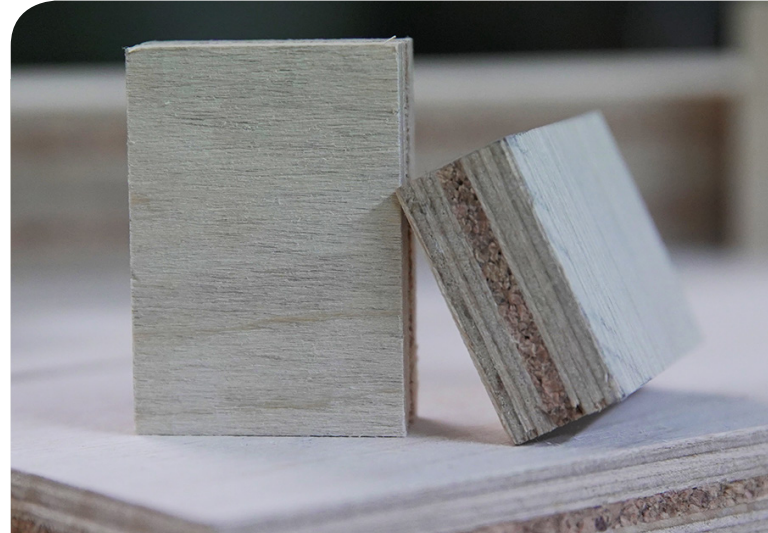
The 'LH' category of 'Subdue' panels includes an inner core with a density of up to 500 kg/m³. It is available in nominal thickness of 16 and 18 mm. Additional thicknesses can be produced depending on customer specification.

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 LH 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.

SPECIFICATIONS

| | |
|---------------|------------------------------------------------------------------------------|
| Core Material | Cork |
| Available | Standard sheet size: 1250 x 1500 mm (trimmed) 1500 x 3000 mm (trimmed) |
| | Other sizes and grades available depending on MOQ |

Product available in India only.



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
- 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

- 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 materials
- Thin and lightweight whilst still possessing high noise reduction properties
- Available in preformed cut panels and varying constructions (offering weight savings) to suit all designs



PRODUCT SPECIFICATIONS

| Grade | Nominal Total Thickness (mm) | Nominal Weight (kg/m ²) | Minimum Flexural strength (MPa) ASTM D790 (Report 23611PH) | R _w / STC* | Sheet size (mm x mm) |
|-----------------|------------------------------|-------------------------------------|------------------------------------------------------------|-----------------------|-----------------------|
| Subdue LH16/250 | 16 | 12 | 30 | 33/33 | 1250 x 1500 (trimmed) |
| Subdue LH18/250 | 18 | 12.5 | - | - | 1500 x 3000 (trimmed) |

Tolerances: Dimensions +5%; Weight: Nominal based on Birch plywood; *Refer to Acoustic Performance below.

Product available in India only. Other grades and thicknesses available. Please contact your local Pyrotek representative for more information.

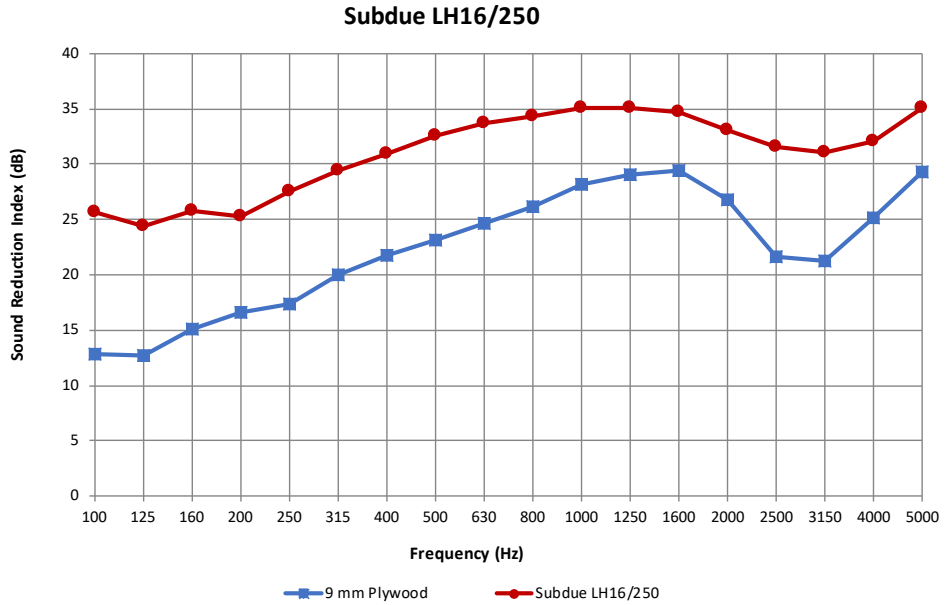
MATERIAL PROPERTIES

| | Test Method | Property | Report No. | Results |
|-----------------|------------------------------------------------|---------------------------------------|-----------------|---------------------|
| Subdue LH18/250 | EN 45545-2 (ISO 5658-2) | Spread of flame | 2224.11S0040/18 | R10 (HL1, HL2, HL3) |
| | EN 45545-2 (ISO 5660-1: 25 kW/m ²) | Heat release rate by cone calorimeter | | |
| | EN45545-2 (ISO 5659-2: 25 kW/m ²) | Smoke generation (optical density) | | |

| Tested By Eskaps - Report no. TC/180614-0001 | | |
|----------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Test method | Property | Nominal Values/Results |
| Internal Lab Test | Loading bearing capacity test (at 1000 kg for 8.5 hours) | Satisfactory. No crack or breakage were observed and deflection angle was found as less than 2 mm. |
| | Total thickness | 16.30 mm |
| | Intermediate cork layer | 4.10 mm |
| | Outside layers | 5.80 mm |
| IS : 1658 - 1977 | Bending strength (Along the grains) | 920 kg/cm ² |
| | Bending strength (Across the grains) | 815 kg/cm ² |
| IS : 3400 (Part - 9) - 2014 | Specific Gravity | 1.22 g/cm ³ |
| | Compressive strength parallel to grain (with maximum 12% moisture content) | 55 N/mm ² |
| | Moisture content (in ambient conditions of 90% relative humidity) | 18.70% |
| | Movement Tangential | 0.90% |
| | Movement Radial | 0.60% |
| C - 9407 Appendix H | Resistance to Ageing | Satisfactory, no surface defect affecting the aesthetic value or marring the protective coating was found. No warping or delimitation was found. |
| C - 9407 Appendix G | Resistance to chemicals | Satisfactory, no surface defects were observed |
| UIC 564 - 2 - Class A, Appendix 4 | Fire protection, resistance to spread of flame | Pass. |
| IS : 1734 - 1983 (Part - 15) | Flexural Rigidity | 757 kgf |
| C - 9407 (Rev.02) Appendix E | Resistance to impact by sudden blows | Satisfactory, no surface cracks to be observed on either side of the specimen. |
| | Visual examination | Satisfactory, no visual defects were observed |

ACOUSTIC PERFORMANCE

| Frequency (Hz) | 9 mm Plywood | Subdue LH16/250 |
|----------------|--------------|-----------------|
| 100 | 12.9 | 25.7 |
| 125 | 12.7 | 24.4 |
| 160 | 15.1 | 25.8 |
| 200 | 16.6 | 25.3 |
| 250 | 17.3 | 27.5 |
| 315 | 20.0 | 29.4 |
| 400 | 21.8 | 30.9 |
| 500 | 23.2 | 32.5 |
| 630 | 24.7 | 33.7 |
| 800 | 26.1 | 34.3 |
| 1000 | 28.2 | 35.1 |
| 1250 | 29.0 | 35.1 |
| 1600 | 29.4 | 34.7 |
| 2000 | 26.8 | 33.1 |
| 2500 | 21.6 | 31.5 |
| 3150 | 21.2 | 31.0 |
| 4000 | 25.1 | 32.0 |
| 5000 | 29.3 | 35.1 |
| R_w | 25 | 33 |
| STC | 25 | 33 |



Tested to ISO 15186-1:2003 & 10140-2:2010
 Report Numbers: 222a, NVH/284/2018-19/590 (V-6)

PRODUCT CODE NOMENCLATURE



For further information and contact details, please visit our website 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.

