SUBDUE® M

damped noise barrier

Subdue® M is a multilayered damped noise barrier panel constructed from two outer layers of lightweight marine grade hardwood, compliant to BS 1088, with the inner core comprising a damped viscoelastic layer. The inner core is thin, dense and made from a specially developed polymer with superior damping properties to improve transmission loss and reduce structure borne noise. These properties make Subdue M a thinner and higher performing composite panel over Subdue L. The product is suited as a lightweight wall, ceiling or floor construction in commercial, rail, and marine constructions.

The 'M' category of 'Subdue' panels includes an inner core with a density of up to 1500 kg/m^3. The core can be offered in weights ranging from 2 - 6 kg/m^2. It is available in nominal thicknesses of 10, 14 and 20 mm. Additional thicknesses between 10 and 20 mm 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 M 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	Wavebar®
Available	Standard sheet size: 2440 mm x 1220 mm untrimmed* 2400 mm x 1200 mm trimmed Okoume plywood (standard), other species available on request depending on MOQ

**Untrimmed means some layers may overhang the usable width.*

applications

- Used to construct floor, partition walls and lining panels in commercial or rail industries
- Particularly suited for medium privacy areas such as VIP rooms and master state rooms
- 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
- Used in the audio industry to construct high quality speaker enclosures
- 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 properties over standard plywood and similar panels
- 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 differing designs
- Subdue M: product category with core layer density of up to 1500 kg/m^3

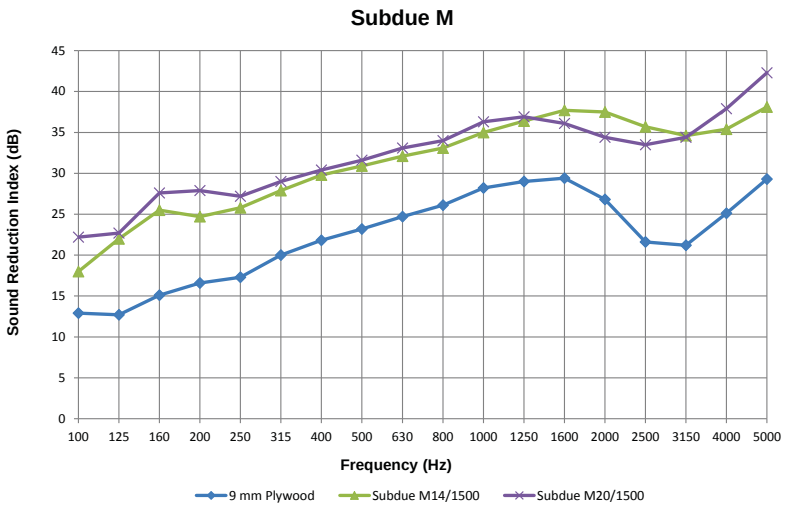
PRODUCT SPECIFICATIONS

Grade	Nominal Total Thickness (mm)	Panel Construction (mm)			Nominal Weight (kg/m²)	Flexural strength (MPa) ASTM D790 (Report no. 23611PH)	Rw / STC*	Decay rate (dB/s)	Sheet size (mm x mm)
		Ply	Core	Ply					
Subdue M10/1500	10	4	2	4	8	-	-	-	2440 x 1220 (untrimmed)** 2400 x 1200 (Trimmed)
Subdue M14/1500	14	6	2	6	10	44	34/34	1458	
Subdue M20/1500	20	9	2	9	12	47	34/34	2070	

*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 M14/1500	Subdue M20/1500
100	12.9	18.0	22.2
125	12.7	22.0	22.7
160	15.1	25.5	27.6
200	16.6	24.7	27.9
250	17.3	25.8	27.2
315	20.0	27.9	29.0
400	21.8	29.8	30.4
500	23.2	30.9	31.6
630	24.7	32.1	33.1
800	26.1	33.1	34.0
1000	28.2	35.0	36.3
1250	29.0	36.4	36.9
1600	29.4	37.7	36.1
2000	26.8	37.5	34.4
2500	21.6	35.7	33.5
3150	21.2	34.6	34.4
4000	25.1	35.4	37.9
5000	29.3	38.1	42.3
Rw	25	34	34
STC	25	34	34



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

Subdue M 20 / 1500

- M — product category
- 20 — total thickness
- 1500 — core type

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.