



## DESIGN AND SPECIFICATIONS

### Description

Solo Dark Core is an acoustical wood plank product consisting of a perforated dark low VOC medium density fire rated fiberboard (MDF) with a ribbed natural wood veneer laminated to the face and an acoustically transparent black mat laminated to the back side (prevents insulation color from reading through). The plank is cut to fit on site and is typically installed on wood or steel furring (610mm) 24"o.c. with insulation placed behind the panel. The plank width measures 192mm (7-9/16") wide x 3050mm (120") long and has a tongue and groove edge which is blind nailed to wood or screwed to steel furring channel mounting clips (supplied) to create a monolithic looking joint.

**PROFILES:** There are various design profiles available: (see Decoustics Wood brochure). Shown above is standard Solo-8 Dark Core with the ribs 8mm (5/16") o.c. and Solo-16 Dark Core with ribs 16mm (5/8") o.c.

Both designs provide the same acoustic response for the same thickness insulation. Solo-16 Dark Core is more appropriate for large scale surfaces.

All Decoustics sound tests were performed using a 6 to 7 pcf (96 to 112 kg/m<sup>3</sup>) medium density fiberglass. Other densities can be used e.g. 3 to 4 pcf (48 to 64 kg/m<sup>3</sup>) with limited change in response.

Solo Dark Core is available in beech, cherry, maple, and ash veneers (quarter cut and pre lacquered), and paint finishes. Other finishes can be accommodated. Standard veneer length is 3050mm (120") ; other lengths available upon request.

### Limitations

**Fire treated:** Solo Dark Core planks are Class A per ASTM E-84 with a flame spread of 25 or less. In its painted format, Solo Dark Core planks are Class A per ASTM E-84 with a flame spread of 25 or less. The lacquer finish applied is a fire retardant version.

Wood products are highly susceptible to changes in humidity and temperature. Close attention must be paid to

acclimatization during installation, as per accepted millwork industry practice.

*Note: Solo Dark Core is a dimensionally metric product. Imperial dimension equivalents stated in this document are rounded to the nearest fraction. When calculating exact equivalent dimensions, divide the metric (mm) dimension by 25.4.*

**RECOMMENDED USES:** Ideal for walls and ceilings.

### Features And Advantages:

Impressive sound control qualities.

Can be stained or painted to match other finishes on a custom basis. Samples must be approved and signed off. See also "Stained Finishes" under Design Considerations.

Although the percentage of open area of Solo Dark Core is approx. 6.0%, the unique v-grooves create a two sided "funnel" effect that allows sound to be absorbed at a variety of angles thereby focussing the transfer of energy over a broader surface area of absorption material.

Absorption characteristics can be modified by changing the substrate thickness.

Planks can be cut using traditional woodworking tools.

### Additional Product Data

**ORDERING:** Standard lead time is 4 weeks for most small to medium sized orders. Large or custom projects may require longer lead times.

**SAMPLES:** It is important that samples be approved based on the finished product and not just a sample of veneer. Held close in hand, a dark veneer with a lighter groove could be quite evident but when viewed at a moderate distance, the color will appear as one.

**TRIM OPTIONS:** Refer to Decoustics Wood Brochure

**PANEL WEIGHT:** A Solo Dark Core plank having an overall thickness of nom 16.5mm (21/32") weighs an average of 2 lbs. per sq. ft. (9.75 kg/m<sup>2</sup>).

# Decoustics Solo® Dark Core Wood Plank

## Continued – Additional Product Data

**SUGGESTED TOOLS:** Traditional woodworking tools are suitable for cutting Solo. Decoustics recommends using large diameter chop saws or radial saws having a carbide blade with a sharp, thin-kerf, 80 tooth - at 254mm 10" diameter - and alternating 40° bevel. Cut plank with face up to avoid scratching.

*Note: A traditional table saw would require the plank to be cut much slower to avoid tearout or chipping. If cutouts are required for round fixtures, Decoustics recommends a router and template method using a quality spiral-down carbide flute cutting bit.*

## Design Consideration

**PAINTED FINISHES:** Solo Dark Core can be painted to match most RAL standard colors, with RAL 9010 White readily available within stated ordering lead times.

**STAINED FINISHES:** Solo Dark Core is available pre-finished with a lacquer or stain, or left unfinished. Decoustics can provide custom stained planks to match other finishes if an acceptable sample finish is supplied to Decoustics.

*Cautionary Note: In the wood finished carpentry industry, low grade veneers are often substituted and stained to simulate a higher cost veneer. Staining veneers are frequently birch, white oak or maple. Also cherry is often stained to "force" aging which would occur naturally over a longer period of time. Typically this practice is specified and not used as a substitute method to lower the price of a product. Custom staining a standard veneer generally adds 15% to 20% to the overall price of a standard Solo plank.*

**CURVED PANELS:** Solo Dark Core cannot be curved, however the plank can be indexed or stepped around a gentle radius to simulate the appearance of a curve i.e. on a radius greater than 5000mm (16'-4").

## After Installation - Maintenance Requirements

Solo Dark Core Acoustic Wood planks are manufactured using real wood veneers and engineered wood components and therefore should be cared for as all other Architectural wood products are. When cleaning, vacuum panel surfaces using a non-marring, natural bristle head. Avoid hard or very short bristle cleaning heads.

Minor surface scuffing or scratches can be removed by lightly rubbing the affected area with a dry, clean pad of #0000 fine steel wool. Do not over apply. Avoid using water or a damp cloth on large surfaces as this may affect the stability of the membrane surface. Aerosol furniture polishes can be used on small areas, however, do not spray directly on the surface of the acoustic membrane. Apply small amounts on a soft cloth and rub gently.

**INSTALLATION:** Solo Dark Core should be installed by qualified finish carpenters in accordance with the Millwork and Acoustical Sections of the specification. Proper tools and construction skills should be employed.

**ENVIRONMENT:** Solo Dark Core planks must be stored, installed, and maintained only in a stable ambient environment (relative humidity of minimum 35% - maximum 55%, temperature to be maintained between 20 - 27°C (68-80°F)) Solo Dark Core planks must be allowed to stabilize on site for 72 hours prior to installation.

## Acoustical Data

FINISH	PANEL THICKNESS	FREQUENCY (Hz)						NRC	SAA
		125	250	500	1000	2000	4000		
<b>Type A Mounting</b>									
Solo-8	16mm (5/8") Plank Core 25mm (1")*	0.21	0.48	1.12	1.02	0.69	0.58	0.85	0.84
Solo-8	50mm (2")	0.58	0.86	1.21	1.00	0.75	0.61	0.95	0.97
<b>Type E400 Mounting</b>									
Solo-8	5/8" (16mm) Plank Core 25mm (1")*	0.71	0.88	0.86	0.89	0.70	0.71	0.85	0.81
Solo-8	50mm (2")	0.99	0.88	1.05	0.97	0.78	0.71	0.90	0.92

\* Panels mounted 25mm (1") from the floor

Wood is a hygroscopic material, and under normal use conditions all wood products contain some moisture. Wood readily exchanges this molecular moisture with water vapor in the surrounding atmosphere according to existing relative humidity. In high humidity, wood picks up moisture and swells and in low humidity, gives up moisture and shrinks. These uncontrolled extremes may affect the structural integrity of the panels and cause visual problems. To avoid this, relative humidity should always be maintained between 35% and 55% in the area where panels are installed.

For repair of fractured or badly damaged planks, consult the factory for advice.

*Note: The information provided in this Data Sheet is accurate to the best of our knowledge at the time of printing. However, we reserve the right to make changes when necessary without further notification. Suggested applications may need to be modified to conform with local building codes and conditions. We cannot accept responsibility for products that are not used, or installed to our specifications. Please refer to our website for most current data.*

*Note: Only handle panels wearing clean, lightweight, white gloves during installation. Follow manufacturer's printed instructions for installation as well as field cutting of panels.*

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