



Data Sheet

Agricultural laminate

March 25, 2008

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DESCRIPTION

This Phenolic Resin based board is a Fibre Reinforced Plastic, (FRP) board, the surface has been designed to suit the agricultural market. The core material being a fully cured phenolic resin provides a durable panel base with long term structural stability and excellent chemical and moisture resistant properties. Whilst the surface material is easily kept clean, hard, water proof it also provides a closed cell surface which promotes good hygiene.

FEATURES

Easy to clean

Because the phenolic resin is not electro-static the panels are not likely to attract dirt, and so a simple hose down with water will be sufficient in most cases. If the heavily textured anti-skid options are being used their surface condition will require a more rigorous cleansing regime using possibly steam or solvent.

Chemically Inert

Cured resole Phenolic resin has excellent resistance to chemical attack. This is the generic resin used in the phenolic resin panel made by Australian Panel Products Australia Ltd.

Non Conductive

The insulating characteristics of Australian Panel Products FRP board provide a panel with excellent electrically non - conductive features.

Non Sparking

The non sparking nature of phenolic FRP board allows its use in areas where this feature is mandatory

Non Corrosive

Because of the inert nature of the Australian Panel Products phenolic resin and its resistance to moisture pick - up the FRP board will not contribute to the corrosion of metal fixings.

Resistant to Microbial Attack

The cured inert resin used does not support the growth of fungii, bacteria or microbes.

Resistant to Steam

Since the cured resin is tested during production to prove steam resistance, steam cleaning is a practical way of cleansing boards with a high dirt load.



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Very Low Water Absorption

Standard test procedures during production show that water take - up is typically less than 1%.

Good Stiffness Characteristic for panel weight

Three point bend tests carried out using production QC procedures indicate that for similar mass, the Phenolic FRP board is stiffer than plywood of similar thickness.

High Impact Resistance

Tests carried out at the CSIRO with Australian Panel Products Phenolic FRP board show minimal indentation when impacted by an ice ball shot out of an air canon at approximately 170 kmph.

Good Abrasion Resistance

The test result using standard abrasion testing procedures and equipment translates into a panel having excellent wearing properties regardless of the finish specified.

Excellent Workability

The nature of phenolic resin based FRP boards permits normal fabrication techniques. There is no need for special tooling; in fact high speed steel tools can be used however for long life tooling Tungsten Carbide Tipped tools are suggested. The panels can be sawn, drilled, routed and glued using appropriate adhesives.

Good Temperature Stability

Because phenolic resin is a **thermosetting** resin, the panel is temperature stable up to a temperature of 150°C.

Good Dimensional Stability

Since the cured phenolic resin has a very low moisture take - up, and is temperature stable to relatively high levels the panels exhibit a high degree of stability.

Panel Sizes

2400 x 1200 Standard.

Other sizes considered upon request.

Panel Thicknesses

Available in the thickness range 3mm to 25mm.

Other thicknesses will be considered upon request.

Face Colour Options

Generally Black and Brown are the standard colour.

Other colours and colour combinations will be considered upon request.



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TECHNICAL

CHARACTERISTIC	TEST METHOD	VALUE/RESULT
Stiffness	Three point bend test	Typical Plate Stiffness "D" characteristic:- 3mm thick = $23.7 \times 10^3 \text{ Nmm}^2/\text{mm width}$. 5mm thick = $130.3 \times 10^3 \text{ Nmm}^2/\text{mm width}$. 10mm thick = $865.2 \times 10^3 \text{ Nmm}^2/\text{mm width}$.
Electrical Insulation Resistance	AS 1795.1 - 1983	Greater than 10 Megohms.
Wear resistance	Taber H 174, 1 H18 calibrate.	50% Surface pattern removed = 50 cycles. Pattern and colour removed = 375 cycles.
Impact Resistance	CSIRO Ice Canon Test	38mm Dia ice ball @ 47m/sec Generally indents less than 1mm
Moisture Resistance	AS 1795.1 - 1983	< 1%
Steam Resistance	AS 2098.2 - 1977	10 hours Steam @ 200kPa No Delamination

Span tables

Live load + Permanent Live Load. Total 1.5 kPa.		
Joist centres Double span	Recommended Panel thickness	Deflection
450mm	10mm	1.07mm
600mm	14mm	1.23mm
800mm	18mm	1.83mm

Capacity of flooring may be greatly improved if a contiguous system is implemented, where two thinner layers are used and glued together and screwed at offset jointing locations.