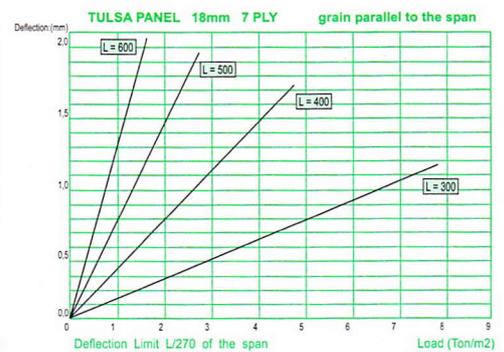
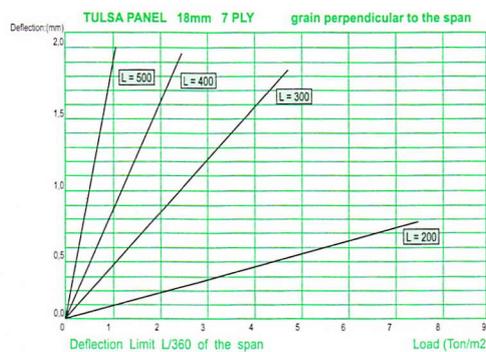
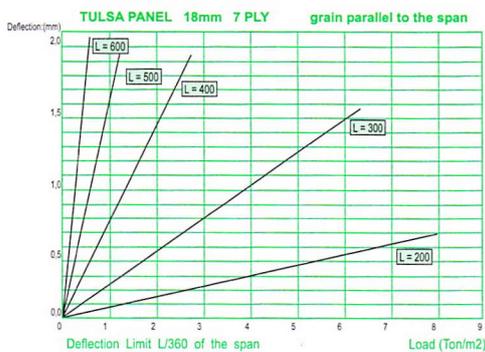


## CHARACTERISTIC

TULSAFORM MDO w/backer products are manufactured with 7 plies of 100% quality Radiata Pine veneers bonded together in a cross banded construction with phenolic resin. The panel is constructed with the face grain veneer parallel to the long edge of the board. The panel is overlaid with a phenolic impregnated kraft paper weighing 370 g/m<sup>2</sup>, and overlaid on the back with a Film 120g/m<sup>2</sup> with a phenolic resin content of 35%. This phenolic film reverse acts as a moisture barrier to balance the composition of the panel. Tulsa overlay panels provide an exceptional high quality finish for hardness, water resistance and behavioural stability. With these characteristics Tulsa overlay panels are designed to allow the end user the opportunity to achieve a high number of re-uses. With correct site practice, storage, handling, care and treatment with appropriate chemical reactive release agents, contractors can achieve as many as 10 – 15 re-uses.

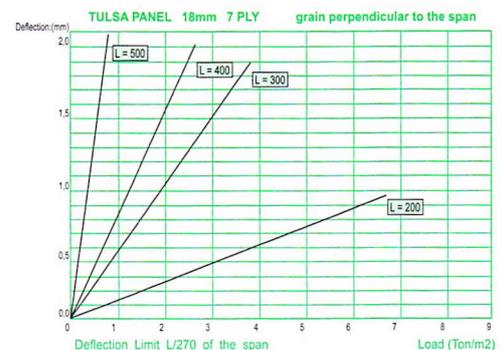
DESIGN DATA Film Information		Tolerances
Pack size	50 sheets	+/- 0,4 mm
Thickness of sheet	18 mm	
<b>Dimensional tolerances</b>		
Width	1,22 mm	+ 0/ - 1,6 mm
Length	2,44 mm	
Squareness	+/- 1,3 mm per meter	+ 0/ - 1,6 mm
Straightness	+/- 1,6 mm	
Make up of product	radiata pine veneers	
N° of plies	7	
Type of adhesive	phenolic resin	
Type of facing material	Radiata Pine veneer	
Anticipated number of reuses	10	
Overlay material	MDO 323 face and phenolic film back	
<b>Overlay material weight</b>		
MDO 323	370 g/m <sup>2</sup>	
Phenolic film	120 g/m <sup>2</sup>	

Sectional Properties (per m width)		
Area	17,9	10 <sup>3</sup> mm <sup>2</sup>
Section Modulus (z)	53,4	10 <sup>3</sup> mm <sup>3</sup>
Second Moment of Area	477,9	10 <sup>3</sup> mm <sup>4</sup>
Bending stress, as follows:		
Parallel to the face grain	7,9	N/mm <sup>2</sup>
Perpendicular to the face grain	4,91	N/mm <sup>2</sup>
Modulus of Elasticity in bending, as follows		
Parallel to the face grain	5810	N/mm <sup>2</sup>
Perpendicular to the face grain	3319	N/mm <sup>2</sup>
Moment of Resistance (fz)		
Parallel to the face grain	0,575	kNm/m
Perpendicular to the face grain	-	
Bending stiffness (EI)		
Parallel to the face grain	3,34	kNm <sup>2</sup> /m
Perpendicular to the face grain	-	
Planar Shear Capacity (qa)		
Parallel to the face grain	12,2	kN/m
Perpendicular to the face grain	-	



Support Spacing (mm)	Plywood Thickness allowable pressure (KN/m <sup>2</sup> )			
	parallel to face grain		perpendicular to face grain	
	L/360	L/270	L/360	L/270
204	73,55	161,81	49,03	49,03
305	33,34	71,59	21,57	21,57
406	16,67	40,21	12,75	12,75
508	9,8	25,5	7,84	7,84
609	4,9	17,6	-	-

Nominal Thickness (mm)	Modulus of Elasticity (N/mm <sup>2</sup> )		Modulus of Rupture (N/mm <sup>2</sup> )	
	to face grain	perp to face grain	to face grain	perp to face grain
18	5810	3320	52,4	33



## HUMIDITY

During its manufacturing panel humidity is controlled and stabilized to 8% moisture content.

## QUALITY CERTIFICATION

Test for physical and mechanical properties are carried out daily by production and quality control teams, and are in accordance with standards set by North American testing agency **TECO** for exterior glue (WBP) to ensure that all products fulfill the standards and norms set in PS 1-95. Tulsa also tests their boards to current EU norms of EN 636:2 and EN 13986:2, and consistently achieve a CE2+

Tulsa aware of its responsibility to future generations has taken the position of prudently using only renewable resources and developing processes that minimize waste materials and allow their reuse, thus becoming friendly to the environment 

## TECHNICAL PROPOSITIONS OF USE

- It is important for TULSAFORM MDO to be oiled twice before first use, and once thereafter before each successive pour.
- In work, store the panels on a flat and dry surface and under a roof or provisional cover, piling up them tidily on pieces of wood of 50mm x 50mm or 50mm x 75mm intransverse to the length.
- The panel comes from factory with its edges painted. If the board is cut and the wood exposed, this must be sealed with water resistant or rubberized paint, this will avoid any damage caused by capillary penetration of humidity.
- Use the appropriate form remover (same as recommended, chemical reactive releases for non porous surfaces)
- Although cleaning a Tulsa Overlay panel is much easier and quicker than traditional form material, it is important to only use fibre spatulas and synthetic materials when cleaning forms to prevent damage to the faces which might occur with metallic tools.
- Although TULSAFORM MDO 323 Overlay panels are very resistant to the abrasion and impact, as with any highly finished surface, care must be taken during cleaning and use to prevent damage. Always use the appropriate vibrators and techniques to protect the panels surface.

TULSAFORM MDO 323 Film Overlay panels are produced using low polluting emission Phenolic resins in accordance European E-1 norms. The glue line fully meets the requirements of exterior bonding class 3 to BS EN 314 – 2: 1993