



Product Specifications

November 2009

Product	TuffPly			
Model	XP	XL	SL	GS
Material Specifications				
Core Material Base	All Plastic			
Core Color	Black	White		
Facing	2 Sided Tuff Plastic			
Surface Finishing	Smooth			
Surface Color	Light grey			
Metal Reinforcement	Yes			
Metal Type	Aluminium	Treated Steel		
Repairable	Yes			
Color Selection	Primary Colors			
Technical Values				
Density, Kg/m ³	850 - 950	580 - 760	720 - 1050	850 - 1220
Bending Modulus, Mpa	4700 - 5500		5300 - 7800	8300 - 21200
Bending Strength, Yield, Mpa	16.5		17	25 - 48
Bending Strength, Ultimate, Mpa	33		46	48 - 60
Operating Temperature, °C	-30 to +90	-20 to +75		
Thermal Expansion, mm/m/10°C	0.9	0.6		
Water Absorbtion, %	0.2	0.6		
Working Conditions				
Sawing	Similar To Wood			
Cutting				
Nailing / Screw				
UV Resistance	Yes			
Impact & Abrasive Resistant	Yes			
Chemical Resistant	Resistant to most acids, akali. Avoid petroleum			
Flamability	Low	Extremely Low		
Enviornmentally Friendly	Yes			
Termite Resistant	Yes			
Product Dimensions				
Max. Width, mm	1500			
Max. Length, mm	5000			
Thickness, mm	9 - 30			
Dimension Tolerance, mm	LW +/-1.5 Diagonal +/-3			
Thickness Tolerance, mm	+/-0.4			

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TuffPly Technical Data
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****Notes**

Data are based on manufacturer's testing and will be subjected to changes from time.
Use of board should not exceed its permissible bending strength. Will cause permanent deformation in flatness.

Board Type	TuffPly-XP									
Model	TPxl-9	TPxl-12	TPxl-15	TPxl-18	TPxl-20	TPxl-21	TPxl-23	TPxl-25	TPxl-27	TPxl-30
Basic Properties										
Thickness (mm)	9	12	15	18	20	21	23	25	27	30
Thickness Tolerance (mm)	+/- 0.40									
Density (Kg/m ³)	940.00	930.00	900.00	900.00	890.00	885.00	880.00	875.00	860.00	860.00
Weight (Kg/m ²)	8.46	11.16	13.50	16.20	17.80	18.59	20.24	21.88	23.22	25.80
Mechanical Properties [ASTMD790]										
Bending Modulus, 3 point (N/mm ²) 25°C	5800	5700	5500	5250	5150	5150	5150	5150	5100	5100
Bending Modulus, 3 point (N/mm ²) 50°C	5500	5400	5200	4950	4850	4850	4850	4850	4800	4800
Permissible Bending Strength (N/mm ²)	17	18	18.5	17.5	16	16	15	15.5	15.5	15
Ultimate Bending Strength (N/mm ²)	44	45	46	45	43	43	42	40	40	39
Usage Temperature (°C)	-30 +90									

Board Type	TuffPly-XL									
Model	TPxl-9	TPxl-12	TPxl-15	TPxl-18		TPxl-21	TPxl-23			
Basic Properties										
Thickness (mm)	9	12	15	18		21	23			
Thickness Tolerance (mm)	+/- 0.40									
Density (Kg/m ³)	750.00	710.00	775.00	680.00		665.00	655.00			
Weight (Kg/m ²)	6.75	8.52	11.63	12.24		13.97	15.07			
Mechanical Properties [ASTMD790]										
Bending Modulus, 3 point (N/mm ²) 25°C	5800	5700	5500	5250		5150	5150			
Bending Modulus, 3 point (N/mm ²) 50°C	5500	5400	5200	4950		4850	4850			
Permissible Bending Strength (N/mm ²)	17	18	18.5	17.5		16	15			
Ultimate Bending Strength (N/mm ²)	44	45	46	45		43	42			
Usage Temperature (°C)	-20 +75									

Board Type	TuffPly-SL									
Model	TPsl-9	TPsl-12	TPsl-15	TPsl-18		TPsl-21	TPsl-23			
Basic Properties										
Thickness (mm)	9	12	15	18		21	23			
Thickness Tolerance (mm)	+/- 0.40									
Density (Kg/m ³)	880.00	790.00	740.00	750.00		715.00	695.00			
Weight (Kg/m ²)	7.92	9.48	11.10	13.50		15.02	15.99			
Mechanical Properties [ASTMD790]										
Bending Modulus, 3 point (N/mm ²) 25°C	7800	7100	6300	6300		5800	5200			
Bending Modulus, 3 point (N/mm ²) 50°C	7300	6700	5950	6000		5500	4900			
Permissible Bending Strength (N/mm ²)	20	18	17	18		16	15			
Ultimate Bending Strength (N/mm ²)	40	36	36	35		32	30			
Usage Temperature (°C)	-20 +75									

Board Type	TuffPly-GS									
Model	TPgs-9	TPgs-12	TPgs-15	TPgs-18		TPgs-21	TPgs-23			
Basic Properties										
Thickness (mm)	9	12	15	18		21	23			
Thickness Tolerance (mm)	+/- 0.40									
Density (Kg/m ³)	1,150.00	1,100.00	985.00	915.00		850.00	825.00			
Weight (Kg/m ²)	10.35	13.20	14.78	16.47		17.85	18.98			
Mechanical Properties [ASTMD790]										
Bending Modulus, 3 point (N/mm ²) 25°C	21200	17800	14200	12800		11200	10200			
Bending Modulus, 3 point (N/mm ²) 50°C	20700	17400	13850	12500		10900	9900			
Permissible Bending Strength (N/mm ²)	62	55	40	33		29	28			
Ultimate Bending Strength (N/mm ²)	78	70	55	45		44	43			
Usage Temperature (°C)	-20 +75									

Handling Conditions		
Nail Holding	Similar to Wood	
Sawing		
Drilling		
UV Resistance		Yes
Recyclable		Yes

Note : Other technical values can be custom designed on request.

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